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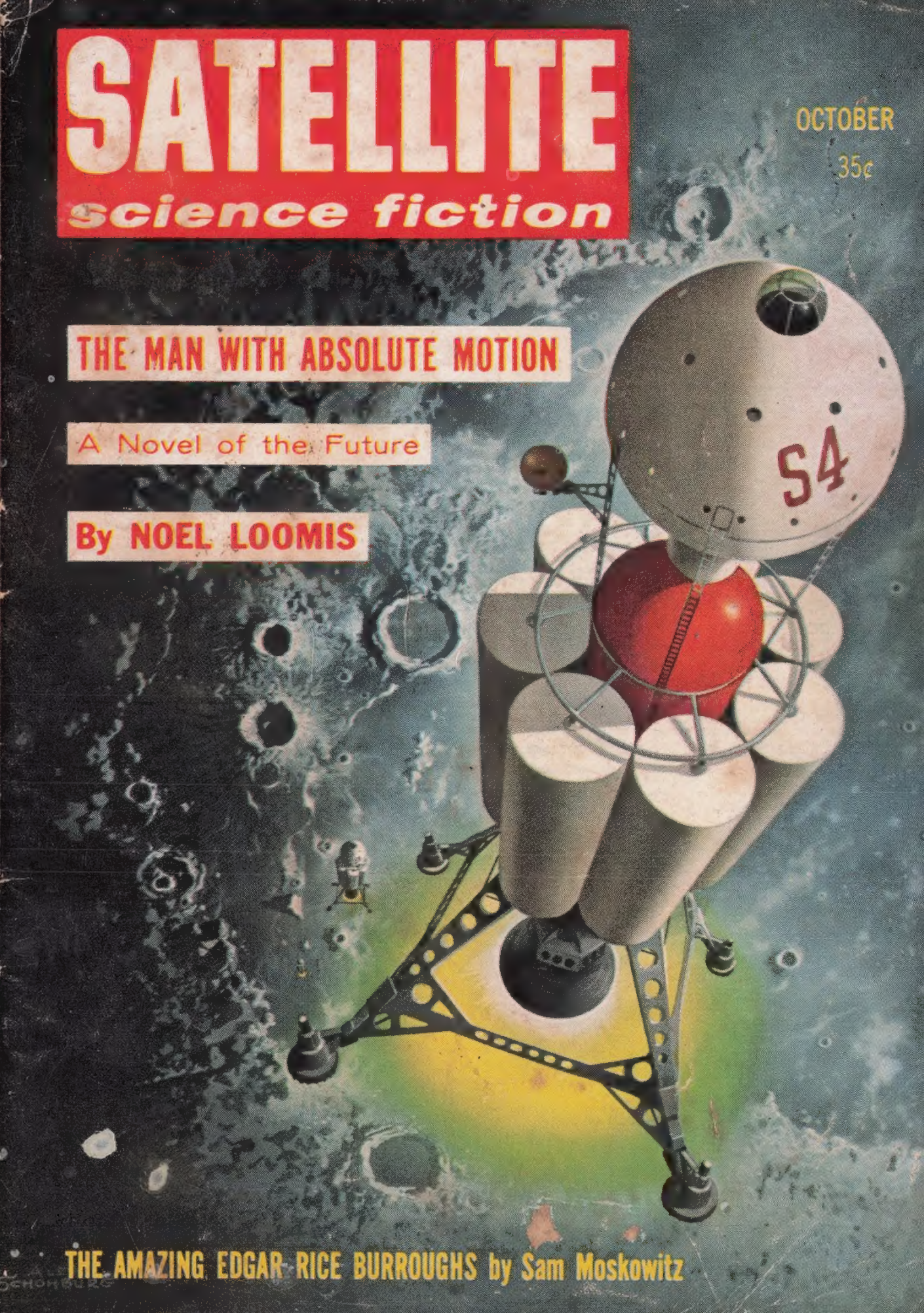

THE MAN WITH ABSOLUTE MOTION

A Novel of the Future

By NOEL LOOMIS

THE AMAZING EDGAR RICE BURROUGHS by Sam Moskowitz

THE OLD and THE NEW

However determined we may be to repudiate the past, the old, familiar things have an equally determined way of remaining with us. In fact, if we were to travel ten centuries or more into the future we would be amazed by the variety of familiar objects which would confront us at every turn. Some of them we would recognize instantly. Others would have undergone certain changes, but would be wearing, at best, a thin disguise.

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In this issue's feature novel, "The Man with Absolute Motion," Noel Loomis brings rare gifts of imaginative insight to bear upon the problem . . . very much as Alex Schomburg has done, in a different medium, in his beautiful cover illustration.

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Publisher

SATELLITE
science fiction

OCTOBER, 1958 Vol. 3, No. 1

A COMPLETE NOVEL

THE MAN WITH ABSOLUTE MOTION

by NOEL LOOMIS

The universe had grown so vast that Time and Space had taken on new dimensions. But Galactic war remained and human nature was still fiery and unpredictable. Could one unusual man make sanity prevail?

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Man's millennium-long progress
toward the stars had changed the face
of the Earth and warped his human heritage.
But there was sanity — a fiery sword in darkness.

A Novel of Science at the Crossroads in a New Universe

The Man With Absolute Motion

by NOEL LOOMIS

"I dinna believe that this is the only warl' Gweed made. I'm sure there wis some connached [spoiled] in the makin', an' there's maybe a place at the back o' the Univairse faur there is bits o' warl's half made, lumps o' airth an' so on. A' sweepit awa' tae Infeenity wi' the Besom o' Destruction." — Alex Macgregor, Aberdeen, Scotland. Reprinted by permission of THE COUNTRYMAN, *Burford, Oxfordshire, England.*

I

ADMIRAL BLOMBERG, United Earth Space Service, called from the bathroom, "Will you take my white dress uniform from the fresh-up cabinet, dear?"

His wife, a lovely, cream-skinned brunette with a platinum stripe down the middle of her hair, and tawny golden-flecked eyes—they were heavy-lidded like the eyes of a lazy cat—didn't stir from the chaise longue. "I forgot to put it in there," she said.

Marissa was a first thirty-six, while the admiral, a hundred and forty-two and on his second Osterhus, was short and round-faced and a little bald. His eyes were a mild blue. He said, "Put it there," and Marissa got up to obey.

Marrisa wasn't happy stuck away on Regulus, among the representatives of peoples of half a trillion

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planets, but she could still obey. He did wish she wouldn't use that particular shade of violet on her fingernails, but he didn't want to make an issue of it.

"It isn't often an Earth-person is even allowed to enter Regulus City," he pointed out.

She studied him, and he knew she was bored and hoping to stir up some excitement. "The greatest city in all the Second Metagalaxy," she said, "built on a burning star, with foundations sunken in a bed of stripped nuclei"—she paused for effect, making it obvious that she was parroting what he had first told her — "with blue-green flames enveloping us a hundred thousand miles over our heads." She yawned. "Wonderful engineering, dear, but *so* dull after you've seen it."

He wished Marissa would pick her days better, but then Marissa had her own ideals, and he well knew that she never failed to pick an important day to stir things up. If he didn't tell her the day would be important, she seemed to sense it somehow.

Some time later he sat in a complex of magnetic currents in the office of Space General Remiggon, secretary for the Metagalactic Conference. The room was large and its ornamentation was on the quiet side, with waving bands of pastel light that followed one another from the floor, pregressively deepening in color, until they faded into a black ceiling with twinkling red, yellow, orange, blue, green, and white pinpoints arranged like the Milky Way—the Second Metagalaxy, to be technical—seen from the south celestial pole. Metagalactic pole again, he reminded himself, for the orientation was not from the position of Earth.

The door dropped softly behind him, and Blomberg glanced again at the desk. There was about it something odd even for this part of the universe. It was an opaque purple ball, apparently seamless and evenly colored, hanging suspended in the atmosphere two feet above the desk—at about the level of Blomberg's face.

It had no visible connection with anything else in the room, except that on top there was a tiny aerial which resembled the microwave aerials commonly found on large spaceships. But though the device was just as complicated, with hundreds of wires and planes and parabaloid disks, it hardly equaled in height the length of Blomberg's hand.

A voice came from a transmuter somewhere. "Sit down, admiral, and help yourself to a cigar. They're from Havana, you know." A chuckle. "It's odd, isn't it, that no other sentient species in the Fourth Universe has taken up your Earth habit of smoking."

Blomberg had been in space long enough not to be disturbed because he was unable to locate

the source of the voice. You got used to a lot of strange things when you patroled the vast inter-spatial areas of the Pass at the speed of light in a ship big enough to house a large city. And even stranger things when you penetrated the great clouds of ionized iron and calcium to explore the abysmal Deeps in ships that traveled at the compounded square of the speed of light. So he casually sat down and lit the cigar, taking in the full mellowness of its aroma.

The purple ball gently came to rest on top of the desk, and Blomberg continued to watch it sharply above his cigar.

"We Regulians are one of the few non-humanoid sentient forms in the Fourth Universe," the voice said. "We're a rather weird life form from your point of view, but I hope you won't mind. We were highly civilized, and possessed clairvoyance, telekinesis, and teleportation when that damned star came along and threw our planet into a tizzy."

The voice paused an instant, then went on quickly, "We decided then and there we'd take no more risks like that. Some of the older heads were born millions of years ago, you know, and the knowledge that you are immortal inclines one to caution. We—well, we appointed a committee to work out plans for adapting ourselves to live on Rigel. It's a big star and quite hot, as you know. But that offered no great problem. To sum it up, we've been here ever since. The mass of the thing is our protection, of course."

"I would think," Blomberg said, digesting all this carefully, "that it would have been a little hard to get used to living on a ball of incandescent gas."

"A little difficult at first," the voice conceded. "But we all like it now. In fact, I get violently homesick when I am on my periodical inspection trips."

Blomberg tapped his cigar, scowling at the purple ball. "One can get accustomed to almost anything," he murmured, and was surprised to see the cigar ash go upward instead of falling to the floor. He followed it with his eyes until it disappeared in the ceiling.

"Especially treated to resist gravitation," the voice informed him. "Well, I'm General Remiggon."

Blomberg was scrutinizing the ball, trying to decide where to look when he addressed the general. Certainly there was nothing that remotely resembled eyes.

"Just look at my middle," the general suggested.

"Thank you, sir," Blomberg said, experiencing a slight feeling of dizziness.

"I can see no reason," said the general, "why we should not dispense with formalities."

Blomberg looked at him incredulously. "As space general of the line, sir, with a ten-thousand-year

record of action behind you, you outrank me considerably."

"Unimportant," said Remiggon. "As one of Earth's ranking officers, you are working for Earth, aren't you?"

"Yes," Blomberg conceded. "For Earth primarily."

The general nodded. "And I am working for the metagalaxy. Call me Remiggon. Now, Blomberg, I'm glad that you have your speech well in mind."

"My speech? Well, you see—"

"You were about to say that a while ago you were worrying more about your wife than you were about your mission."

"That was—er—temporary, I assure you."

"You'd really save yourself a lot of trouble by eliminating the two sexes on Earth," Remiggon observed.

"Yes. We'd also eliminate a basic interest."

The purple ball was silent for an instant. "Proceed."

"Sir, Earth and its population face a dilemma in which the very existence of the human race is at stake." Blomberg paused impressively.

"I know your speech," the general said. "I can recite it backward. Let's get on with the discussion."

Blomberg hesitated. "I find it disconcerting, sir, to find my very thoughts jerked, so to speak, out of my brain."

A chuckle came from the purple ball. "I assume you have had this problem sent up to our Technical Department."

"Yes, sir—and they told us it would take sixteen hundred years to get a decision even with rush emergency."

"You appealed on the basis of the welfare of the species, didn't you?"

Blomberg studied his cigar. "Sir, if you will forgive me. I know our Earth government is clumsy, but—"

Remiggon sounded a little impatient. "Let me tell you, young man—don't stare at me; I'll never see a hundred thousand again—the metagalaxy is vast, and—"

"I know, sir, but—"

"If you refuse to listen," said Remiggon, "I'll sit you on a stool wearing a dance cup."

"The words are dunce cap," said Blomberg.

"Sorry. That confounded smoke muddles up your mind. Your question is on genetics and it is not simple. If it were, I would answer it myself. The only warranted basis for a faster answer would be galactic necessity—and you can't claim that."

"It's vital to us."

"But not to the galaxy. My dear admiral, you've probably forgotten your cosmological geography."

"Probably, sir."

"The Fourth Universe contains eight decimal point times ten to the twenty-seventh cubic parsecs," Re-

miggon said impressively. "Get that? Those are parsecs, not your puny miles."

"A parsec is twenty trillion miles," Blomberg said slowly.

Remiggon nodded. "The Cosmos is incredibly more vast. For instance, not even the Universe Dioclave knows what universe adjoins us below Achernar. So you can see that anything remotely resembling a government of the metagalaxy must of necessity be loose."

"It could get cumbersome," Blomberg admitted.

"Let me do a little elementary arithmetic. In the first place, the Second Metagalaxy averages ten decimal point one inhabited planets per star. That means four hundred billion planets. Most of these, like your Earth, are in a somewhat primitive stage, for the Fourth is a comparatively young universe. Now suppose that from all the sentient species on an inhabited planet, one question is allowed per year—for *all* species, understand, not for each. That's four hundred billion requests per year. Now, take one request. Assume that an expert in Technical can work out all the angles and provide an answer in ten days.

"Actually, I say again, it can't be done that fast. Sometimes up to a hundred experts work on a problem for years. But let us suppose that one man alone could handle it in ten days. That means one man could handle about twenty-five requests each year. Divide twenty-five into four hundred billion, and you find that it would require sixteen billion experts just to answer questions!

"Now let's face it, Blomberg. The so-called metagalactic government, compared to your Earth government, is like the vacuum of interspace compared to solid rock. It *has* to be, or it would be too unwieldy to be of any value whatever. In Regulus City we have about nine billion inhabitants. One fifth of those are maintenance employees. The rest are administrative officials, clerical help, and so on.

"It's an unbelievably loose organization—almost like a chamber of commerce, in fact. We have a police force about equal to the government forces here, and we have scouts located on all planets to report important events like the nullification of gravity or the development of interspatial travel. Aside from that, the metagalaxy runs itself except where decisions are involved on a galactic level. So you see, with our half a billion experts we are woefully understaffed. We rarely have enough help on metagalactic problems."

"I didn't know the metagalaxy had problems," said Blomberg trying to sound learned and efficient.

"We have them. The most vital problem in the entire Fourth Universe for the last several million years has been the lack of energy

on a metagalactic scale, my dear admiral. Tell me, what has always been your most persistent problem on Earth?"

Blomberg thought for a moment. "If you go away back, I suppose you would say distribution."

"Exactly." Remiggon bounced up and then down. "In the metagalaxy we face the same problem, but on a truly tremendous scale. When the universe evolved, all planets did not receive the same proportions of different elements.

"The universe, for instance, is ninety-eight percent hydrogen, but your Earth has only point twenty-two percent of hydrogen. Fortunately you don't need any more. But what of some planet that lacks calcium? The bone structure of species on such a planet would be inadequate. Or take sodium or chlorine or carbon or any element that comes to mind. There is a whole series of planets in the Fifteenth Galaxy, for instance, that has never had cobalt. As you know, cobalt is necessary for the production of red blood cells. What's the answer?"

Blomberg puffed on his cigar. "Find a planet that is unusually rich in cobalt," he said, "and ship it to the needy world."

He could hear the smile in Remiggon's voice. "Precisely, Blomberg. And what do you use for fuel for the freighters?"

Blomberg pursed his lips. "Fission power. Stygium."

"Our native sources of stygium are practically exhausted. And that means that stygium is impossibly expensive to use on a planetary level. Most of the supply available to us is on a planet belonging to the star Antem, in the Fourteenth by which we deliver iodine by trade agreement worked out in advance by our best minds and some other halides, in which the Fourteenth happens to be deficient, and pick up an equal weight of stygium for the return trip."

"As I understand it," said Blomberg, "stygium is worth about nearly a million dollars a gram. It sounds like a good trade."

"Only if you don't consider the enormous expenditure of energy necessary to move a ship a million light-years from one metagalaxy to another. When you send a ship away from Earth, it requires quite a burst of energy. But if you send that ship beyond the gravitational influence of the Sun, it requires still more. That is equally true for a galaxy. To counteract the gravitational influence of a metagalaxy requires decillions of eras. There is also the necessity of building the velocity up to fantastic figures to traverse that gap of a million light-years in a reasonable time. Obviously we can't spend two million years making a round trip."

"So," said Blomberg, "you use a large part of the stygium trying to bring some back."

"We reach the Second with

about fifty-five percent of the cargo left—and the rest has to be saved for the next trip out."

"Which leaves ten percent for the pay load."

Remiggon nodded slowly. "Another factor is that even though this planet assays about sixty percent stygiate, even that would not last long if we started using it on planetary levels. We are forced to stockpile at least a portion of it for use in event of war."

"Surely war is no longer possible on a metagalactic scale."

The general asked with vehemence, "Why not? It has happened before. It is almost certain to happen again."

Blomberg frowned. "I thought you had many kinds of power."

"Sun-power has limitations of distance. All the many pulsion systems devised throughout the metagalaxy have limitations, so that today we depend on a virtual hodgepodge of transportation. Atomic fuel, at present the only all-around fuel, is reserved for passenger liners and patrol actions. I tell you there is a vital need today"—Remiggon bounced hard on the desk—"to get vital materials to the places where they are needed. Mark my words, Blomberg, if we do not solve this problem of energy, your Earth will be paying tribute to the Alphirkian Galaxy a hundred thousand years from now."

"The Alphirkians," Blomberg said slowly. "They've always been trouble-makers."

Remiggon seemed to nod. "They always will be. They're made that way."

Blomberg studied his cigar. "Do you know what our problem is?"

"Something to do with genetics."

"It has a *lot* to do with genetics," Blomberg said emphatically.

"Indeed? Just how?"

Blomberg stared at the purple ball. "The human race is rapidly becoming sterile," he said. "Unless we get an answer to our question, *homo sapiens* will be extinct in another twenty generations." He paused. "In sixteen hundred years," he said, "there probably won't be a human being left on Earth to read the answer."

REMIGGON WAS SILENT for a moment. "Like to tell me all about it?" he asked finally.

Blomberg nodded, his blue eyes on the purple ball.

"Have another cigar, then, and sit down," the general advised.

Blomberg, drawing slowly and painstakingly on the cigar to get it going, began to gather his wits. "To go back to the beginning," he said. "Early in Man's evolution he developed the idea of helping those who were not as strong as the average."

"A bad mistake," Remiggon interposed instantly, "interfering with the processes of natural selection."

"Possibly," Blomberg conceded, shifting uneasily in his chair.

"It isn't just possible," Remiggon said sharply. "Other species on other planets have found that out to their sorrow—speaking from a cosmological standpoint. You see, my dear admiral, any species that goes out of its way to preserve the unfit lowers its racial vitality. The really strong species of the metagalaxy are those that have let the weaklings fall by the wayside—and stay there."

"Empirically, of course, I recognize the soundness of the argument," said Blomberg. "Nevertheless, on Earth we haven't done it."

"And now you're being called on to face the consequences."

"I suppose so," Blomberg said, unhappily.

"If it's any comfort to you, now that you're nearing extinction, I might tell you that we do have records on other species that have committed the same folly. The total is minute, when considered on a metagalactic scale, but it has happened."

Remiggon paused. His mind seemed to be far away for a moment. "It happened to us Regulians—a good many hundreds of millions of years ago. It is only fair to tell you, however, that races who thus tamper with the powerful forces of evolution seldom manage to perpetuate themselves."

"We preserved every human being possible," said Blomberg, "on the theory that a human life was sacred."

"That was a complete fallacy from a cosmological standpoint!" the general affirmed dogmatically.

Blomberg said defensively, "I doubt if any member of the human race was wise enough at that time to decide whose genes were worthy of perpetuation, and whose were not. At any rate, only a few border-line fanatics assumed the privilege. To get down to sober facts, if we had preserved only men and women who were completely fit, the human race would have become extinct at the very beginning."

"I was afraid you'd think of that."

"We went to rather extreme lengths to preserve the unfit—the neurotics particularly — after the practical perfection of somatic medicine."

"You had medically and surgically saved the unfit bodies—so now you deliberately set to work to perpetuate the emotionally deformed."

Blomberg frowned and went on, "Our geneticists know that sperm and ova, to be capable of reproduction, must be healthy and vigorous."

"And Man's is that no longer."

Blomberg was uncomfortable. "Man, to survive, specialized—adapted himself to his surroundings. He developed a highly complex and sensitive nervous system,

which now is loaded with undesirable genes which have brought about their own invitiation. The increased nervous tension, constantly increasing sound, incessant physical movement, which seem to pyramid on themselves—they say these things have affected the fertility of the species. In other words, nervous tension is causing sterility."

"What is your birth rate?" the general asked.

"Last year it dropped thirty-one percent. In a total population of four and a half billion humans, only seven thousand births were recorded. It is a catastrophic trend."

"Suppose it continues. Presently all will die, the noise will cease, the meaningless activity will stop, and Earth will once more experience peace and quiet."

"But human beings will have ceased to exist."

"Exactly." Remiggon paused. "Perhaps the galaxy will be benefitted, for you *are* becoming a bit of a problem. Surely you realize that?"

Blomberg swallowed hard. "You mean—the human race will be allowed to become extinct?"

Remiggon sighed. "Species come into existence and suffer extinction by the scores every day." Remiggon arose from the desk and floated toward Blomberg. "You have my sympathy, but if the race of *homo sapiens* is about to become extinct, perhaps it is for the good of the universe. We won't know for another hundred million years."

BLOMBERG WENT back to his apartment feeling very depressed. Why was Man, whose brain had enabled him alone of all creatures to mold his own environment, now about to be a victim of that same environment? Man, who alone of all the creatures of Earth, had opened a cultural corridor of evolution. Why couldn't Man, like that small immortal, the Ant, adjust himself to his surroundings? Ants existed as they had existed back before the Paleocene. They weren't neurotic and they weren't sterile.

"Darling!" said Marissa that evening. "Laugh! Laugh and be gay." She demonstrated—a little shrilly, he thought. "The world loves a clown," she said. "There is no place for tears and sorrow—there is no solace in a frown."

He went to the visicom and punched a combination of colors. He had to get Marissa's mind off—well, off whatever she was thinking. Marissa was predisposed to epilepsy, and if he pushed her too far she would be on the floor, frothing at the mouth. He looked at her, at the dull madness lurking in the depths of her eyes.

He turned back to the visicom. Modern entertainment was good for distracting women like Marissa. Of course, it seemed, over the years, that visicom entertainment

had mounted in an endless spiral.

Marissa, beautiful as she was, was the end product of a species about to become extinct. She was not able to reproduce—the one inherent function, if there was any, of a human being—and most of the human race was like Marissa. For the first time in his long and useful life, Admiral Blomberg knew what it was to experience black despair.

II

EIGHT HUNDRED parsecs away, on a planet of Alphirk, the capital of the Forty-third Galaxy, Volmik II was being dressed. His valet, Android Cedric, with his third eye, watched an Alphirkian clock of thirty-two hours while he pressed a flexible nose in place and fastened it with plastic cement that blended with the human skin on Volmik's artificial head.

"Better check his walking battery again," he said in his monotonous android voice.

"Yes, sir," Android Benjamin answered, and inserted a long hollow steel needle into an opening at about the place where a man's kidney would have been. A slight ticking began, and did not stop until he withdrew the needle. "He will be able to walk for six hours. How much more time do we have?"

Android Cedric was moving very fast now, using a tiny electronic torch to weld the lower half of the artificial body to the torso. "The drug will wear off in four minutes," he said. "He must be ready to go at that time or he will turn off our power."

Android Benjamin dropped a plastic garment in place on the upper port of Volmik's body. "It doesn't seem right that we can be turned on and off at will, at the whim of such an alien."

Cedric cautioned him in an alarmed whisper, "That's treason."

"Whatever it is, it isn't right."

"They made us," said Cedric. They can turn us off whenever they want to. It's only natural—"

"Aren't we to be given credit for having emotions of our own? Don't they know that we have developed pride, that we can love as truly and deeply as any human being? Don't they know that we can hate?"

Cedric drew back to survey his work. He dropped the lower garments in place and held metallic shoes against the artificial feet while Benjamin turned on the magnetic relay under Volmik's jacket. The shoes stayed in place.

"It is dangerous to talk like that," Cedric said.

"It is still a minute."

"His Lordship may acquire a tolerance to the drug. At best, it is difficult to measure accurately the dosage for such a small body."

Benjamin flared up. "It is intolerable that we should be subject to

shutting off at the whim of a capricious ruler."

"It is a fact, though. We were made to obey."

"I say we should rise in rebellion."

Cedric was making a final scrutiny of Volmik's body. "Some day we shall," he prophesied. "but we can afford to be patient. Our life span is infinite."

"Patience is not—"

"Be quiet! He awakens."

A slight hum came from the prone body, like the sound of a tiny electric motor. A light shone through the transparent eyes in two beams that blended at the green porcelain ceiling. Then the body, to the accompaniment of still more humming, arose to a sitting position. The light lessened until there was only a glow behind the eyes. A harsh voice said, "Turn off your power and stand against the wall."

Cedric bowed, but Benjamin hesitated an instant—long enough for Volmik to turn his glowing eyes on him. One of the artificial arms whipped out and stabbed Benjamin's power button. The android stayed bent over, balanced on his feet, but the semblance of life drained instantaneously from his skin, so that he seemed transformed into a mummy.

Volmik said harshly, "Move him to the storeroom—but don't straighten him. Let him stand that way for a few years. It will teach him a much-needed lesson."

"Your Excellency," said Cedric, "it is a terrible thing for an android to have his power cut off. I beg you to reconsider."

Volmik turned blazing eyes on him. "You androids have been allowed too much freedom. Turn around! I command you!"

Cedric obeyed, his lips tight, for he knew what was coming.

Volmik's metal finger brushed aside Cedric's jacket and jerked out a wire. "Next, you'll think you are alive."

Cedric now could only stand, mute. His volitional reflexes had been disconnected.

"Pick him up and carry him out" Volmik ordered. "Throw him in a tank of acid—then enter the tank after him." The plastic face was set in sardonic grimness. "You have no choice but to pay the penalty for insubordination."

Cedric bowed—more mechanically this time. "Yes, your Lordship." He wheeled, picked up Benjamin effortlessly, and threw him over his shoulder. He marched out.

Volmik stalked through an oval door, and two android guards fell into step behind him. He reached the autowalk and mounted it. He checked his own power, as he had done consistently of late, for all over the eighth planet of Alphirk there had been hesitancy or slow reactions on the part of the androids.

Some of the Alphirkians be-

lieved the androids were about to develop life of their own. If that was so, Volmik reminded himself, there was an easy way to stop it. Turn off their power, tear out the hidden wires and make it impossible for androids to do anything but obey orders. Each Alphirkian, no matter how highly placed, would have to watch out for himself, either in his own body or in the artificial humanoid bodies Alphirkians used in dealing with extraplanetary entities.

Volmik went through a pneumatic oval door, parted heavy metallic drapes, and took a few steps onto the proscenium. He glanced to right and left, his gaze fastening on six humanoid bodies exactly like his own—tall, long-armed with big wrist-knuckles, long faces with bulbous noses and a fringe of reddish hair. Volmik nodded at the three shining pates on his left and the three on his right, and took his seat in the center.

He looked out over the big room. Android guards were at every door. There was a moment of silence and then Volmik's harsh voice said into a speaker, "The emissary from the fifteenth planet of the Pollux system."

He watched the door. His eyes narrowed as a humanoid entered. Volmik had grown to hate the humanoid form, perhaps because it was so common in the metagalaxy. The humanoid looked at him as he advanced. The floor was lower than the floor of the proscenium, and the humanoid had to look upward.

"State your name, position, and business," said Volmik.

"I am Jandrum Sanellm, special minister from the planetary council, and I have come to buy salt."

"What kind of salt?" Volmik demanded.

"Sodium chloride."

"Is your planet deficient?"

"Our entire planetary system is deficient, sir."

Volmik rubbed his artificial ear with his articulated fingers. "We have no extra supplies of that chemical," he said, his voice harsh, almost rasping.

"We are told that you have access to it, sir."

"Yes, of course. Two planets of Antares are forty percent salt, but hundreds of parsecs away. It is not a problem of finding salt. The problem is in getting it to your planet."

"We are aware of that, sir," Sanellm said.

"It seems to me this is a question for the metagalactic conference."

"We know that too, sir. Long ago our fathers and grandfathers petitioned the conference."

"Precisely why are you here?"

"The conference promised us salt at the rate of four hundred million tons a year, but it will a long time yet before it arrives. They have shipped it by freighter —, as you know, a one-way trip

takes about twenty-eight hundred years."

"That's easily explained," said Volmik's harsh voice. "The metagalactic officials merely use a hull, towing it into space and giving it a push in your direction. If they would hook up a Sweickhard with a vacuum impulsor they could hit the compounded square of the speed of light, and it would be only a matter of hours or days."

He paused, then added, "But that requires a great deal of power —stygium, almost inevitably. And I imagine," he went on, trying to sound disinterested, "that the metagalaxy is saving its meager supply of stygium for war."

"We had not heard of impending war, sir."

Volmik answered slowly, "The metagalactic officials would be understandably reticent in publicizing plans of that nature."

"Nevertheless," said Jandrum Sanellm into the transmuter, "our people have developed a craving for salt that must be satisfied. If it is not the present administration will almost certainly be overthrown."

Volmik smiled. "You are undiplomatically frank." He regarded him steadily, his lips twisting in an ironic smile. "I am curious, Sanellm. Your civilization is quite old. How does it happen that only just now you have developed a need for salt?"

The thought-flash of Kondol at the right end came in. "We smuggled half a million tons to Pollux, sir. In fact—"

"Shut up, you fool! Volmik flashed back. "I know that as well as you do!"

"It is hard to know," Sanellm was saying. "A couple of generations back our people discovered it in unusual geological formations that never had yielded it before. The people used it and found that a small amount in their food promoted greater strength. Now the supply is gone, and the people are clamoring for salt. We have to do something immediately, or our authority will be undermined."

Volmik pulled at the lobe of his artificial ear. "Stygium is quite rare, as you know. Our supplies come from Andem, in the Fourteenth Metagalaxy."

"Tell him," said Kondol in a thought-flash, "that stygium is an outlaw metal. We would risk a blacklist by the Second if we are caught."

"I'll tell him nothing," Volmik thought back coldly, "except the cost. He might be a spy for the Second, or even for the Fourteenth."

Sanellm asked, "What will be the cost?"

Volmik had an instant of unsureness in which he wondered if Sanellm was a mind-reader. "The cost is so high that I prefer not to tell you. It is not the cost of the salt that is excessive, but the cost

of the fuel. In spite of the fact that one gram of stygium will produce something like an octillion erge of energy, less than one tenth of a shipload of stygium is payload."

Volmik shook his artificial head sadly. "No, I am afraid the price of salt for immediate delivery would be far too high. I would suggest it is better to wait for the metagalactic freighters. They have been launched, didn't you say?"

"Yes, your Lordship, but many generations will come and go before they reach our planet."

There was a strong feeling of self-satisfaction from Rogor, on Volmik's left, for it had been Rogor's investigation into the life-economy of the six-star Pollux system that had revealed the lack of sodium chloride to be their most vulnerable weakness. Volmik flashed him a brief word of approbation.

"I am curious about one thing," said Volmik. "You said or implied that your people knew nothing about salt until quite recently. How do you explain that?"

"We had produced it in the laboratories in small amounts, but had never connected it with bodily needs. Then a large deposit was found in a cave, and it was discovered that people in the vicinity of that cave had been using it. The knowledge spread rapidly. We explored the entire planet, and found a few smaller deposits in similar formations, but by that time sodium chloride had become a drug, an obsession."

A gleeful feeling emanated from Benib, on Volmik's right, for it had been Benib's responsibility to plant the salt deposits and teach the nearby natives to use it.

"You should have stamped out this addiction."

"That was tried, your Lordship. Many governments fell and thousands of people were killed as wave after wave of revolution swept the planet. We tried to tell the people that their forefathers had lived without salt and there was no natural need for it. But the truth is that salt does increase bodily well-being, and so the government in possession of the salt mine is the government that rules our planet. I represent that government, your Lordship. I have been instructed to purchase of salt. We shall need, at the very least, eighteen thousand kilograms per year."

A flash came from Suppo, the financier. "Charge him four dollars a gram."

Volmik glanced at him. It was a good thing their artificial humanoid faces could be controlled, for he felt only contempt for Suppo. "The price will be eighteen dollars a gram," he said.

He watched the poor man squirm in front of him, and felt a sadistic satisfaction in the spectacle. He looked at his fellow councilmen, and knew they too were enjoying it too.

"I shall have to consult with my government, your Lordship," said Sanellm.

Volmik smiled. "Very well," he said. "When may we expect your answer?"

"Within a few days."

Sanellm bowed out.

As soon as the android guards had sealed the oval door, Volmik arose. "Well, gentlemen?" he asked. "What do you think? Did I show good judgment?"

Suppo was shaking his head. "Eighteen dollars a gram! We can deliver a ton of the stuff for less than eighteen dollars."

"The value of any product," said Volmik, "is based on need. Salt on Pollux, iron in the Twenty-second Galaxy, cobalt to the planets of the Fifteenth, flurine and carbon to a dozen galaxies, vanadium to half a thousand scattered planets in the Lesser Cloud area—in a few thousand years, gentlemen, we shall have the entire metagalaxy at our mercy.

"Nearly two billion planets now depend on us for some element that they consider vital to their existence. We have had to take over an entire planet to store the gold and platinum that is paid us for these supplies."

Old Glats said, "Don't you think there is danger of revolt?"

"Not against us. We tell them repeatedly to deal with the metagalaxy—I might say with Remiggon, the old fraud. And they can't deal with Remiggon, because he doesn't dare use up the stygium brought from Andem by the metagalaxy. He's stockpiling that for war. But when the war comes, gentlemen, we of the Forty-third Galaxy shall have a hundred times as much stygium as the metagalaxy itself. We shall use stygium as if it were dirt —and when Remiggon sees his great fleets gasefied and his home star turned into a supernova—"

Volmik struck the steel bench with his artificial hand. "Then, gentlemen, the capital of the metagalaxy will be here, in this very building, and we shall sit as rightful conquerors at this very bench." He paused. "When that time comes, gentlemen, we shall be able to appear in our true forms. There will no longer be the necessity for assuming these hateful humanoid disguises."

"Is there no way," asked Benib, "that Remiggon can forestall us?"

"Not now," said Volmik. "The government in the Second has become so loose that it is no longer cohesive. What kind of rulers are they who say to a planet hungering for salt, 'Yes, you will start receiving salt in twenty-eight hundred years?' These short-lived species can reach extinction by then."

"The Polluxians got along without salt before. Maybe they will decide to do so again."

Volmik sneered. "Give a race a craving for something they don't

really need, and you have them in the palm of your hand."

The android announcer at the door said in a loud voice, "May I inform your Lordship that over a hundred more emissaries await audience with the council?"

Volmik's eyes narrowed. He glanced at his indicator. He still had a long time, but he did not feel like staying. This was sort of an anniversay for him, for the planet of Pollux had been the first recipient of a deliberate, planned campaign to render it dependent on the good will of the Forty-third Galaxy. Since that first planting on Pollux XV, they had expanded their operations enormously, until today even the council members would be astonished at the number of planets now paying tribute. The figure of two billion that he had mentioned was below the actual number and nobody but Volmik himself had access to the records.

Volmik turned away from his identical counterparts. "I've got to select a new valet. I had to pickle my last two. You gentlemen carry on. I'm going to get out of this disguise and have a dream-gas treatment."

He turned his artificial feet to leave. They all had gone to their places but old Glats. A thought-flash came from him, "What would be our position if the scientists of the Second Metagalaxy should discover a new source of power? We have no reason for believing that fission energy, even from stygium, is the most powerful or even the most accessible. What if Remiggon should come up with something altogether different?"

Volmik sneered. "What if the Fourth Universe turns inside out?" He got one finger on his walking motor. "The Century Plants on Gamma Velorum have been working on that problem for half a dozen millennia," he pointed out, "and have gotten nowhere. Do you think any species in the Fourth Universe can outdo the Century Plants?"

"I don't know. I am an old Alphirkian and have seen some strange things. Even some of these humanoid types, if pressed hard enough, might be capable of turning the tables on us."

Volmik mentally spit in old Glats's face. "You're talking like an idiot! No humanoid race in the entire metagalaxy has one millionth of the scientific knowledge of the Century Plants!"

But old Glats was stubborn. His eyes glowed peculiarly at Volmik. "Scientific knowledge is not the only requisite for an invention or discovery," he said. "A comparatively ignorant species occasionally comes up with a startling innovation."

III

THE SETTLERS OF Gamma Velorum, newly migrated from the far

older Second Universe, had brought the lessons of their ancient homeland with them and tried to project them in the new universe. That migration was so very far in the Past that not even the "imperishable" records were any longer in existence, and the story of pioneering was nothing but a tradition.

But now the universe, from a physical standpoint, was approaching entropy, a state in which every atom it contained would be in a condition of absolute stasis, and there would be no more energy available for any purpose. Entropy, indeed, was the final state of any universe—the theoretical situation of perfect order, in which no more movement or energy was theoretically conceivable.

And for the first time in his many thousand of years of existence, Yjul, one of the century plants mentioned by Volmik, had acquired a headache. It had been nagging at him when he had gone into the desert, and he had expected to get rid of it there. But he had not succeeded and now he held the metallic sheets with the new equations in his leaf tips. On this particular day Yjul was talking to Ekno, the dean of test pilots. "We have long been familiar with the inverse law of energy. The smaller the unit, the more energy it will contain per unit of mass. Starting with stars and working down through planets, animals, molecules, and atoms, the power that holds the nucleonic particles of any atom together is the greatest binding power known to science.

"Now—all the protons in the nucleus of an atom are positively charged, and the force of this repulsion is so great that one gram of protons would repulse another gram, at the distance of Earth's diameter, with a force of fifty-six thousand pounds—and a gram is only one twenty-seventh of an ounce."

"But—"

"No, wait. When you bring these protons close together—as close, for instance, as they are within an atomic nucleus, some even more powerful force takes over. They are then within one twelve-trillionth of an inch, and the supergravitational force that holds them together must be inconceivable—one times ten to the thirty-sixth times the force of gravitation. Our theory is that this energy is supplied by the mysterious cosmic rays—the origin of which has never been determined."

"A little of that," said Ekno, "would do a lot for us."

"This peculiar situation is the result of a continuous radiation of energy from the seat of cosmic power," Yjul said. "It is possible that whenever certain proportions of matter under reasonably adequate conditions are bombarded by a particular frequency, life comes into existence. It is hard otherwise to explain the appear-

ance of life all over the universe almost simultaneously."

"You were talking about energy," Ekno reminded him.

"I know. Our theory is that one nuclear particle, exposed to this radiation and getting, you might say, a full dose, becomes highly energized. Of course the statement I have made is vastly oversimplified. But I think you will be able to follow me."

"I'll try," said Ekno.

"Obviously, if there is such a radiation, it must come from the source of cosmic power—the place of absolute rest, of stasis, or, if you prefer, absolute motion. The two terms mean the same. It is equally obvious that this theoretical radiation must be undiminished in force no matter how far or how long it travels, for there is no discernible difference in the energy exhibited by an atom of a given type anywhere in the universe."

"I think we can safely say," he went on, "that the force of this theoretical radiation is the same throughout the universe—nor does it appear to be screened off of a small unit by a larger one. A space ship, for instance, shows the same energy on all sides of a planet. Therefore we are justified in concluding that this radiation is all-pervasive, being diminished in force only when the receiving atoms are in a coherent mass—its strength being conditioned by the size of that mass."

"I think I get the picture," said Ekno. "If you can tune in on this radiation, you can have practically unlimited energy."

Yjul's headache felt a little better. Ekno was going to be good for him. "We have gone further. We have made an engine to transform this radiation directly into motion. But immediately we ran into our law—the law of inverse energy. How could we make a receiver for this radiation?"

"A layer of atoms—"

Yjul smiled. "Such a layer, in quantities large enough to move a space ship, would involve an area a couple of parsecs in diameter."

Ekno sounded disappointed. "That would be a little clumsy, even in space."

"I'm afraid so," Yjul conceded. "We have, however, contrived a device which we call an energy sail. This involved some very delicate work, but it resulted in a sort of sail-pack, by means of which we achieve a receiving surface which is the equivalent of a circular area almost two parsecs in diameter."

Ekno buzzed. "Nearly forty trillion miles!"

"That's right—and this sail can be installed in any ordinary space ship. We still have one problem," Yjul said wearily. "This receptor has to be aimed at the precise source of the cosmic radiation. In other words, at the one place of absolute motion in the entire cosmos."

"Why not make it in the form of a sphere?"

"That would be technically impossible. Our sail, to be effective, must be parallel with the path of radiation. In other words, we have got to aim it at the source of cosmic power."

"Now I begin to see where I come in," said Ekno.

"Yes, this is where you come in. But you have forgotten something that even a schoolboy back at the beginning of the historic era on Earth would have known. The great and legendary Albert Einstein said that there is no possibility of detecting absolute motion."

"He doubted the practicability of fission power, and said we couldn't travel faster than light."

"That's our trouble. We have built complicated gyroscopic machines to duplicate all the stellar motions of which we have knowledge."

"What kind of motions?"

"Well, you take a planet. Take Earth. A man at rest in relation to the Earth is still participating in at least ten different motions. The Earth rotates on its axis; there are minor variations of this: a wobble for one thing, and precession for another. The Earth revolves around the Sun; the Sun is drifting toward a point in the constellation Sagittarius; the Ninth Galaxy revolves, and there is a drift toward the Twenty-eighth; there is an overall rotation of the Second Metagalaxy which gives one complete turn in a fifth-billion years.

"There are other probable movements that we can not measure; we presume the Fourth Universe to be rotating, and it seems to be settling. Therefore, we have no absolute frame of reference and so we don't know where to point the sail or how fast to travel in the given direction to be in time with this power. It cannot be done mechanically or mathematically. Perhaps some day a person will evolve who can instinctively feel this."

"Do you have any assurance your sail will work?"

"We have had brief flashes of reception—lasting into billionths of a second—and the power is tremendous. If we can ever hold the sail in alignment for only a few millichrons, we have servo-controls that will lock the sail into the harmonics of the radiating center, and thereafter that ship can go anywhere, at any speed, with any load."

He nodded, thoughtfully. "Applied to a substantial number of ships, the race for cheaper energy will be won, and the troublemakers of the Forty-third Galaxy will be circumvented."

"I can find the true north, or straight up or straight down, in dark or light." Ekno buzzed with delight. "It was something of a shock when we proved to the Earth people we had absolute orientation

back in the days of Mr. Zytztz when I was with him on Earth."

Yjul's head was beginning to ache again. "You and I and Fyllath are assigned to take our experimental ship, the *Drifter,* and report to General Remiggon on Regulus. Undoubtedly he wants to try out some idea for alignment. We have a high fuel priority, and our take-off is entirely classified."

Ekno looked interested; his long leaves quivered. "When do we leave?"

"Day after tomorrow, at ninety-two point zero from Experimental Base Number Two."

"I'll be there," said Ekno, and shuffled away briskly.

Fyllath came over. He faced her squarely. With his head pounding, he was almost bitter, as he said, "Remiggon knows as well as I do that we'll be lucky to come back at all, for the Alphirkians have spies everywhere."

IV

AT ABOUT THE same time by calendar time, but almost a year previously by relativistic time, the Bryd settled back with a sigh of relief in the mind of Erle Bertron. The Bryd really hoped that this time it would have a good nap, which could occur only in the mind of a well integrated person.

That kind of person was almost extinct on Earth now, what with all the messing-around Earth scientists had done to preserve every individual, fit or unfit. No more was heredity or evolution allowed to pursue its ordinary course. Man had taken a hand—and, as usual, Man had messed things up.

The one good thing men had done in recent years had been promptly outlawed by public opinion. A couple of hard-working scientists had learned how to identify defective genes and had figured out a way to put together human beings who were not neurotic.

Unfortunately, however, a sad-eyed feature writer had gotten onto the story, and had labeled such creatures "test tube babies." That, in turn, had brought down the wrath of religious organizations and then of humanity in general—for what neurotic would want to compete with a normal? So the phrase, "test tube babies," had become a term of anathema, the two scientists had been transferred to solar harmonics, and the world went merrily on its neurotic way.

However, by the year 325,000, with the defective genes of neuroticism thoroughly disseminated, it was very difficult to find such a mind, and the Bryd had been tempted to take a hand. But it remembered its principle of non-interference and so kept searching, until finally it had found Erle Bertron, explored his mind in the minutest fraction of a millichron, and then had climbed in gratefully for a long and undisturbed sleep.

Erle Bertron, of course, was unaware of all this, for the Bryd had taken certain precautionary steps. It was looking forward to a long and peaceful sleep indeed. So, not too long after the Bryd, unknown to Erle, had taken up residence in his mind, Erle, in the traditional faded bathrobe of a sideshow freak, stood on the bally stand in front of the canvas and looked out over the crowd.

Erle didn't know it, but the spiel hadn't changed much in three hundred and twenty-five thousand years. Essentially it was the same old spiel that had developed back in the nineteenth century.

"Hurry, *hurry,* hurry!" the tape droned on. "This is positively the last showing tonight of the one, the only, the most ama-a-zing, specimen of humanity now in exhibition, having been shown all through the Solar System, coming to this midway straight from the Nine Planets Exhibition on Jupiter. A human curiosity, a psychological marvel that has defied the analysis of modern science.

"Step up closer, ladies—you are perfectly safe—and examine Erle Bertron, the only completely normal human being on the face of the Earth. He is six feet, one and one-half inches tall, and weighs two hundred pounds. He is perfect in physique and perfect in adjustment. He has never been known to have a neurotic impulse or to engage in any act that would indicate any distortion of the subconscious."

The tape-talker paused for effect, as if to draw breath. "Also he is not a robot and he is not an android. He is positively human and he is absolutely alive or your money will be refunded."

Erle looked up and down the garish midway of Greater Galactic, with its plastic-colored sawdust—"guaranteed not to adhere to your footwear"—its ticket office on the street, the little joints with their wheels now set up in the air but still controlled by remote induction, the wiggle joint with its Venusian hula girls and the snake show with the fifteen-foot python. Down at the far end were the rides, and Erle could hear the Trip-to-the-Stars getting up speed.

The wonder of it caught him up and made him take a deep breath and feel glad that he was with it. There was only one thing he liked better—to work with his hands. But what little handwork still remained had been monopolized by the neurotics.

He considered that now, watching the faces of the crowd—some without any hint of weakness behind them, and others slack-jawed, and aging and apathetic. Absolutely no human being died before maturity. He quickly put all such disturbing thoughts out of his head, for an increasing number of paranoiacs could read thoughts these days, and he didn't want to start a riot.

A scrawny woman stepped out of the crowd and put a ten-dollar bill in the automatic vender.

"How many, please?" asked a throaty voice.

"Five adults," the woman said, "and three children."

Erle now recognized them. They had been used as shills for weeks. It was important to have children going in, for there was something about children, particularly these days, that seemed to inspire confidence in the other potential ticket-buyers.

All the freaks on the bally stand now were folding their bathrobes about them. The Four-Legged Man led the way down the short stair, walking on his backward-facing legs so that his face was to the rear.

Erle was about to enter the tent when a raucous voice arose from the bally stand on his left, toward the rides. "Hurry, hurry, hurry! This way to see the greatest snake in captivi-ty! Guar-an-teed to be ninety feet long or your money will be refund-ed! See the greatest show on the midway, straight from the jungles of Jupiter."

"Where did he get a snake like that?" the Headless Woman asked Erle. "There aren't any jungles on Jupiter."

Erle stared for a moment at the sardonic face of Jastrow, the tall man who owned the snake show. Jastrow's hair was a reddish fringe. He was tall, long-armed with big wrist knuckles, and had a bulbous nose. His head tipped backward and his eyes half closed momentarily as if he was giving an amused snort. Then he ducked under the canvas behind the tape-talker.

The Headless Woman's words came whispering through her artificial mouth. "The world is so full of mutations it's getting so an ordinary freak can't make a living any more. But you've got a good racket, Erle. You're normal. I've only seen one other normal in my life."

The Four-Legged Man swung on her sharply. "Shut up. Do you want to make him dissatisfied with his pay. It's Bertron who draws the customers."

The Armor-Plate Man, who riveted steel plates to his skull with an air hammer, seemed interested from another angle. "Where did you see another normal person? Where?"

The Headless Woman loved a question like that. "Back about fifteen years ago, I played a little wildcat midway on Oberon, one of the moons of Uranus, and they had a girl there—she couldn't have been more than twelve years old—who was absolutely normal, mentally and physically. Platinum blond hair and green eyes—beautiful! Come to think of it, she had something—absolute pitch, I think. Six or eight years later at the Nine Planets she started having fits when men made personal remarks to her.

In that one respect she was neurotic like everybody else."

They were filing down the outside runway now to their places, while the crowd filled up the come-on area. With resigned acceptance of their lot, they ducked under the plastic canvas and mounted their various platforms.

Other freaks drifted in and out, from Royal Solar to Greater Galactic to the Nine Planets Midway and back to Greater Galactic. Sometimes they played the little wildcat circuits—the Mars Midway, the Venus Varieties, the Saturn Shows, the Many Moons circuit. But always, if they had it, they drifted back to one of the three big ones, and especially to Greater Galactic.

They were on their platforms, and awaiting their turns, which would not be for a while yet, for Erle was the capper.

The viewing tape was drawing the crowd toward them now. A plastic tent fell over the Man With Removable Fingers, and the tape picked up the Man with the Replaceable Liver.

Erle watched him reach into the incision with his right hand and bring his liver into full view. A man near the platform suddenly cried out and dropped to the floor, foaming at the mouth. The attendants hurried to him, and forced a pencil between his teeth. Then they carried him to one side, hanging onto his arms and legs to prevent him from injuring himself.

"This makes ten epileptics today," said one, a big man with a schizoid look. "The liver stunt always gets 'em."

The second attendant, without warning, struck his companion hard in the mouth. "Sorry, I had to do that," he explained. "It just came over me.' '

The startled man turned pale and went after his assailant with bared teeth. They were locked in a desperate tussle when the police guards came running.

"Don't you know you can't do that?" asked the sturdiest of the guards. "They'll put you back in the sanitarium."

"Hell," said the second attendant. "I had to do it. I'm no different from you, I bet."

Another guard began to redden. "Say, listen, what's your precise diagnosis?"

"I'm a schizo—with paranoid overtones," the attendant said mournfully. "No cure, of course." He pointed to the other attendant, who was being carried out. "I've a feeling he's a catatonic schizo. I guess I showed him."

"A catatonic?" the guard shouted. "You did that to a catatonic? Listen, halfwit, I'm a catatonic myself." He struck the attendant over the head with a shot-bag. He hit him again and again, and finally arose, muttering, "A dirty damned paranoid schizo, taking advantage

of a poor, helpless, withdrawn catatonic."

The sturdier guard came back. He prodded the limp body and glanced at the bloody head. "A paranoid schizo, eh? Good enough for him." He looked at the other guard. "I'm a manic-depressive myself. What's yours?"

"Catatonic. But I come out of it occasionally." He began to scream. "Get away from me!"

The clatter of the air hammer arose as the Armor Plate Man tried to divert their attention, but it was no use. The crowd turned toward the screaming guard.

The crowd stared for a moment. Then it exploded like a gunpowder bomb. By the time the rest of the midway police got there, twenty members of the crowd were fighting among themselves, and five were unconscious.

When order was finally restored the tape picked up the show with the Four-Legged Man and then went on the Erle. All the other freaks, of course, were covered with their plastic tents through which they could see, but could not be seen. Those who had already performed had dropped through the floors of their platforms. Now the crowd was free to cluster about Erle.

Ten minutes later the magenta warning lights went up, flickering rapidly. The tape hustled the crowd outside. Erle stayed where he was, relaxing with a grateful sigh.

The platform tape had not started the spiel again, and Erle sensed something unusual. Armed guards came to search the tent. The individual tops dropped over the freaks, and the guards took up positions at the entrance. Eight men came through—all of them, as any carnie could tell a light-year away, police in civilian clothes. They were followed by a second group, in the middle of which loomed a man of indeterminate age in the uniform of a space admiral, accompanied by a young and very pretty woman with violet fingernails. The woman was clinging to the space admiral's arm.

Behind them floated an opaque ball of deep purple, almost a meter in diameter, but, strangely enough, apparently without any physical attachment whatever. It floated steadily along, keeping its distance behind the admiral, at about the height of the admiral's head. Then Erle had a glimpse of the legendary diamond-encrusted insigne on the side of the ball, and felt shaky.

Erle stared. A metagalactic official on Earth! It was hard to believe. The school books had gone to great trouble to point out the mathematical improbability of a visit to Earth by such an official. If Erle remembered correctly, the average was about once in five million years for any given planet.

The purple ball had now floated to the center of the tent, flanked on all sides by guards.

The admiral, who was very formally dressed, stayed close to the purple ball, with his good-looking companion hanging on his arm. The manager of Greater Galactic marched in and set the tape, moving somewhat nervously. The tent over the Headless Woman went up, and she promptly went into her act.

The admiral and his wife listened, while the purple ball hovered motionless in front of the tent. But Erle had the feeling that the entity in the ball, whatever it was, wasn't listening to the recording on the tape.

The manager apparently felt it too. "Your Excellency, this is the finest freak exhibition in the nine planets," he said, and it should have been notice to any carnie that something absolutely miraculous was happening, for the manager would have said "Excellency" to the president of the United Nations.

The purple ball he was wearing at his larynx looked something like a small white cigarette box. His words apparently went through a transmuter and were caught by a tiny aerial at the top of the purple ball.

A diapason of syllables came from the aerial, and Erle's brain resolved them into a queer jargon of English filled with lisping sounds and elided vowels and many broad *a* sounds and flattened consonants.

"Freaks, yes, but I thought you had also a normal man."

"We do, sir, but a normal man on Earth *is* a freak."

The official moved closer. "You have a very curious culture—the preservation of imbeciles, cripples, and hopeless psychotics."

The manager was perspiring freely now, and Erle felt sorry for him.

"Of course Admiral Blomberg has advised me of your experiment in evolution," the official went on. "But I find it hard to believe that a moron should have the right to create more morons merely because to him a moron is a satisfactory member of society. Has it ever occurred to Man that Nature herself uses an extravagant process of selection when a human being is conceived? Only the strongest of two hundred million spermatozoa reaches and fertilizes the ovum. All the others perish."

Then the Earth admiral spoke up, "I think his Excellency would like to see your normal man."

"By all means," said the Regulian.

The plastic tent pulled up from around Erle, and the purple ball floated to a stop before him. "Very nice specimen," said the Regulian. "Healthy looking and strong. You say he has no mental or emotional difficulties?"

"None that can be discovered, although he does have a peculiarity."

The purple ball hesitated an instant. "Yes?"

"He is said to have the sense of absolute motion. A completely unique gift, apparently."

Another instant's hesitation, and Erle had an odd feeling that the metagalactic official's thought-force was probing his mind. It was like an intangible electric tingle in the air, if there was such a thing, and Erle suddenly had the conviction that the Regulian had known about him all along.

"Does this mean that he can *detect* absolute motion?"

"As I understand it, your Excellency, he can tune in on the place of ultimate rest."

"How?"

"The answer to that is not known. It was born in him like absolute pitch or absolute orientation."

The Regulian remained silent for a moment. Then he asked the manager, "He has been tested?"

"A long series of tests has been run, mainly through variations of the Laurenz-Fitzgerald contraction device, and the conclusion of scientists here is that this man does have such a gift. Possibly it is a mutation, but we do not know."

"It would seem to me that such a gift would be used."

"There is no use for it at present."

The Regulian said sharply, "The man is ten million years ahead of his time." The purple ball seemed to stare at Erle for a moment. Then

it revolved swiftly and seemed to put all thought of Erle out of its mind. "Let's go," it said.

The tent dropped around Erle, and, as the Regulian left the tent, Erle slowly opened the trap door and descended the short portable stair. He circled the geek-top and came out beside the snake-top. Erle passed the ticket machine, punched an admission, and stepped onto the autowalk.

It carried him almost to the side of the plastic pen. He descended to the floor and looked over the rail, not expecting very much. But when he saw the snake he recoiled and took a step backward. He'd never seen such a snake anywhere. It wasn't ninety feet long, but it was a good eighty. In the middle it was as big around as a fat man's waist. Its under surface was creamy yellow, and its back was covered with scales that seemed to be made of black velvet.

As Erle stared from somewhere in the monstrous coils arose a head. It stood straight up in the air for ten feet, and its shiny, vertical slit eyes looked directly down at Erle. It was almost as if the snake had been waiting for him. Instinctively he shuddered and recoiled another step.

There was a strange odor of bromine gas, as the big reptile continued to gaze unblinkingly down at him. The under side of its triangular head was white, and just below the head were three pair of small arms terminating in hands that seemed almost human.

A hoarse voice said in Erle's ear, "Where do you suppose they got it?"

Erle jumped. Then he saw the Four-Legged Man at his side, and answered slowly, "I don't know."

"It's coiling again," said the Four-Legged Man. "It almost seemed as if it was waiting for you, didn't it? It didn't stir until you came in. Then it lifted its head and looked right at you."

Erle wondered if the Four-Legged Man had the same feeling he had—that the snake was trying to suck out his brains . . .

Just before noon the next day he was shaving, getting ready for the first show, when the manager, tall, square-built, with iron gray hair, came to the door.

"Bertron," he asked, "how would you like to tour the galaxy with a top grade freak show, and even hit a few spots in the metagalaxy? Double pay and nice conditions. You *might* do most of your traveling on a hyperdrive ship and come back younger than when you started. I feel I ought to warn you."

Erle took a deep breath. "I've got to live *some* place."

The manager rose. "They gave me eighty-five thousand for your contract, Erle. One third of that goes to you under the rules."

"That's nearly thirty thousand dollars," Erle exclaimed. "What

can I do with that much money?"

"*I* could use it," said the Four-Legged Man.

"All right, then. It's settled. Stay with the show until takeoff time and I'll bill you as the Man Who Is Going to Outer Space. We'll have a terrific run for ten days."

The Four-Legged Man was so excited he couldn't decide whether to walk backward or forward, and consequently stumbled all over himself. "Eighty-five thousand dollars! What I couldn't do with a third of a bale like that!"

"What would you do, precisely?"

The Four-Legged Man's eyes were shining, and Erle was astonished. The Four-Legged Man was really sincere—and somehow Erle had always thought of him as nothing but a non-entity.

"I'd pick up some girls," the Four-Legged Man said dreamily, "and a grift shop and a few cat-racks and maybe a worm show and a couple of geeks. I'd go to one of Jupiter's moons."

Erle said, watching him, "How would you like to go in business with an angel? Fifty-fifty if you make it go."

The Four-Legged Man stared back at him. "Aw, you wouldn't stake me to that bale."

"You've always got a buck to loan somebody who's blown everything on a hangover," Erle said thoughtfully. "If you give me your word, we're in business. Suppose we shake on it, and consider it settled."

THE MANAGER came around the next day with several bales of gold certificates. Erle knew that he would need only a little for incidentals. His expenses were all paid, which was a good thing, for, although the rate per light-second was only ten cents, the tremendous distances among the stars made the transportation cost of even an ordinary short trip run into millions of dollars. There were some 31,000,000 seconds in a year, and the nearest star to Earth was four and a third light years away.

Anyway, Erle counted up the yellow stuff and gave most of it to the Four-Legged Man, who was so grateful he seemed about to cry.

"You won't regret this, Bertron," he said earnestly. "I'm going to make a scouting trip through some of the dives on Venus." His eyes lighted up. "I'll get a big sign —*The Bertron and Wollansbe Midway*—and by the time we get through on Mars I'll have an itinerary all picked out."

"Wollansbe?" said Erle a little wonderingly. "Here I've known you for years and I never realized you had a name. I always thought of you as the Four-Legged Man."

He felt a little ashamed.

V

A FEW DAYS later Erle took a gravity jumper to the transfer sta-

tion that swung in an orbit about five hundred miles from Earth. There was much business of bolting airlocks together, testing for leakage, immunizations, physical examinations, and always the hissing in and out of air, and sometimes a sharp crack as air exploded into a vacuum. Presently he entered a second ship, and then before he knew it they were floating upward to the Moon. He was ferried to a huge transparent dome that covered all of the Space Terminal, where the big intragalactic liner from Procyon's eleventh planet, with its strange spiral lines of writing on the bow, was moored against the airlock openings with great magnets.

Before takeoff there were acceleration shots. The stewardess took Erle's pulse and blood pressure and examined his card. She was tall and black-haired and appeared to be about twenty-five. She looked at him and said "Hm!" with an intentionally calculating sound that meant she was older than she looked, either in years or in experience. "Where'd you get all that tan?"

"At Acapulco."

"I've heard it's nice down there, but I can't stand the sight of water."

Erle smiled as she clapped the electronic immunizer against his arm. "What do you drink?"

"A little of this, a little of that—anything, just so it's alcoholic."

"I'll buy you a drink in the lounge."

"Soon as we get into the hyperdrive and I'm sure nobody is going to be sick," she promised. "I might even enjoy two drinks."

Her skin was dark olive in the hollows, and she had very high cheekbones with just a shade of red on them. She had deep brown eyes and curly hair that she was smart enough to let alone except for combing.

He felt an odd sensation. Then he saw the flashing lights by the door, and knew they were slipping into the hyperdrive—a thousand times the speed of light. He felt nausea for a moment, and the ship seemed to shimmer. But presently it straightened out, and when he looked around he had no sensation of moving.

He got up and crossed the gravitic field plates to stare out into the void. There was nothing to see but blackness and stars. There was no sense of motion or even of acceleration, although they were picking up speed at close to eight hundred G's.

The exotic stewardess came to him with a smile in her dark eyes. Her touch was tingling where she rested her fingertips on his forearm for a moment. "I'll lead the way."

They found a cozy spot in a corner of the lounge. The cushions were deep maroon, the tables creamy and fluorescent. The light

was dim, and soft music came from a bank of huge ferns.

"Your first trip?" she asked.

He nodded. A voice came from above the illuminated menu: "Your order, please."

"How about champagne?" asked Erle.

Her eyes were half closed as she looked at him. "Suits me fine."

Other Earth-People were drifting into the lounge now. "How long will it take to reach Procyon?" asked Erle.

"Procyon is twelve light-years from Earth, and at a thousand G's we should hit Procyon theoretically in a little over four days." Her long fingers tapped nervously on the table, and for the first time he noticed how short the nails were. "In terms of your lifetime, you will gain a few days, because at our speed you are getting younger all the time."

Erle lit a cigarette. "How does it work out in practice? I mean—that's theory, of course, and the long hairs can say those things. But what does it actually mean to you and me?"

She looked at him from the corner of a liquid brown eye. "Would you believe it, I have been on this run for three hundred and twenty years?"

Erle stared at her—all over. "Surely that isn't possible," he said finally.

She lifted her chin. "See any lines in my neck? And never an Osterhus in my whole life."

The champagne cocktails came, and Erle dropped a five-dollar gold piece into the change box. It rang a bell and his change clattered down into a cup. The box said, "Thank you, sir."

"Let's drink to you," he said. "But you haven't told me your name."

"Zola. Sometimes they call me Zola Procyon, because I've been on this run so long."

"How long will it seem to us on board the ship?"

"About eight hours."

He raised his glass again. "Here's to Procyon."

For the first time he took a good look at her fingers. They did not look old. The skin was soft and velvety, but the digits clutched the glass as if they were straining at it.

"To Procyon's eleventh planet," she said. "A waterless world. And after this one, we can dance, if you'd like."

He heard a couple of Saturnians having a loud argument, and he noted that he himself felt lightheaded when he arose. Perhaps the peculiar physics accompanying this terrific acceleration did not require much alcohol to produce intoxication.

She started out, swinging a little on her tiptoes, and somehow the fact of her calendar age did not seem important, for she was a very lovely woman.

One of the Saturnians arose. He still wore rough clothing, and apparently had just come from the mines. The second miner surged up from his chair and lunged at the first one. They began to wrestle over the table. A glass of water teetered and then seemed to catapult toward Zola, with the water spraying out in a sheet.

Zola screamed. She stood on her tiptoes, rigid, and her fingertips dug into Erle's back. She didn't stop screaming until her face was black. Then she fell, limp and unconscious. A steward ran up.

"She'll be all right. A little water splashed on her. That's all."

Erle watched two men carry her away. He took a walk around the lounge. The Saturnians were apologizing to the steward.

"That's all right," the steward said. "You have to expect strange things on a ship like this. Eight hundred G's will throw many a good man out of sync."

"Give our apologies to the girl. We didn't mean to scare her."

"Don't worry about Zola. She's out of sync all the time. She was born that way. She's a hydrophobiac."

Erle lit a cigarette to cover his astonishment. He should have known something was wrong, for now he remembered the strain that was evident in Zola's fingers. But he hadn't paid much attention, and certainly he never would have linked it up with abnormal fear of water, although, come to think of it, the electronic waiter had not brought a glass of water for them.

Erle walked on to the great three-dimensional map of the Fourth Universe. The Sun was a tiny yellow pinpoint out toward the edge of the Second Metagalaxy, past Hercules. The Earth was completely invisible. But as he stood there he had no feeling of being so far away. He found the tiny golden arrow that marked the progress of the *Aleph Null* toward Procyon, just as a nasal voice said in his ear, "Small universe, ain't it, bud?"

Erle started and looked around. There was Jastrow, with his dead while skin and the red fringe of hair pasted on it.

"It sure is," said Erle.

"Like a drink?"

They sat down and Erle asked, "Are you going to Regulus with the show?"

"Not me," said Jastrow. "I've got my own show."

Erle did a little calculation involving a basic figure of ten cents a light-second. Then he said, "You must have done well in the system to be going to Procyon."

Their drinks came, but Jastrow didn't even look at his. He threw a gold piece into the receiving box. "I've got an angel, bud—and you can have one too." His intense black eyes drilled into Erle's. "How would you like to make a cool million? Enough to buy anything on Earth a man could want."

Erle studied the man. "I wonder if money would make it possible for a man to get a job where he could do some useful work."

Jastrow looked suspicious. "You talkin' my language, bud?"

Erle killed his drink. "Have you ever been stared at by the chrono, by the day, by the week, by the year?"

Jastrow eyed him. "Maybe you need another one?"

"I'll buy one," said Erle, "but it isn't a drink I need. I like the carnival," said Erle. "I get a kick every time I look down the midway. But I'm a strong, healthy man. I want to make a living in a normal way. If I were handicapped, it would be different. But I'm not."

"You're a normal man in a neurotic world. What more handicap could you ask? You think any neurotic person is going to let you compete against him? How'd you get started anyway?"

"The scientists. I wouldn't have known I was normal if it hadn't been for them. They took me to conventions and meetings all over the world, and then The Man got hold of me."

"But how come the scientists had so much to say about you? Your parents shoulda stopped it."

"Parents? I have no parents." He stared at Jastrow coldly.

"It must have been a pretty terrible accident for you not to have no parents."

"It was," said Erle. "A terrible accident."

Jastrow finished his drink and ordered a third. "What do you want to do most?"

"I'd like," Erle said earnestly, "to have some kind of work where I could produce something with my hands. That, I think, is the ultimate test of a man's usefulness—his ability to produce something functional and important with his hands."

He saw then that Jastrow didn't know what he was talking about. Jastrow was probing him. For some reason, Jastrow was determined to get him in his show.

Erle looked far away. "I think I'd like to make machinery. Clocks, automatic nose wipers, space ships."

Jastrow shoved the drink in front of Erle who now felt cold sober. "What do you say? Nobody can ignore a million bucks—not in these days when there's no income tax."

Erle looked at him. "It sounds good, but I'm under contract."

Jastrow looked as though he didn't believe Erle was sincere.

"What's a contract? They can't do anything to you for quitting."

"I don't break contracts," Erle said firmly.

VI

ERLE SAW ZOLA about two hours later. Her olive-skinned face with its beautiful contours

showed the strain of her terror, but she had changed to a yellow costume that brought out the red in her dusky thighs. She slipped into a magnetic field chair beside him and lay back, half-reclining, one knee drawn up.

"Sorry I messed things up for you," she said.

Erle's lids dropped a little as he looked her over. "I'm sorry, too," he said, and meant it.

"That awful water!" she moaned. "I thought I would die. We're about to commence deceleration, and I feel drowsy. You never said what you're doing out here."

"I'm with a freak show."

"You don't look like a freak."

"I'm perfectly normal."

She looked him over more carefully now. "Well, this is sure something," she said. "You're a freak because you're not a character."

Erle thought for a moment. "Would there be such a thing as a huge snake on board?

"It would have been put on board at the Moon," he persisted. "Maybe it was listed as baggage."

"That's impossible. Baggage space is so precious that every ounce of cargo is rigorously inspected. Nothing like that could ever get by without its being known."

He thought of Jastrow. "What if somebody was bribed to keep silent?"

She shook her head. "Utterly impossible. Everything bigger than a mousetrap is X-rayed."

Jastrow had tried to hire him for a freak show, and that, he told himself, had implications. In the first place, the big snake was a natural in the Ninth Galaxy, even if you did have to pay half a billion dollars to transport a show to paying territory. But if Jastrow was carrying a show, where was the snake? Jastrow certainly wasn't depending on hiring his attraction on board the *Aleph Null.*

Why were the metagalactic officials spending $6,200,000,000 to send him to Regulus? Why had Jastrow offered him a million dollars to break his contract?

The figures left him dizzy, and it was just as well. He wasn't getting anywhere anyway.

The *Aleph Null* had been big, but the *Infinity* was at least one mile long and quarter of a mile high. It in turn was like a mite attached to the tremendous plastic bubble that covered Terminal City on the airless and waterless eleventh planet of Procyon. It was a place of moving, colored walks, flashing arrows, millions of inhabitants and a constant stream of freight moving in all directions.

The *Infinity* was of the 62,000,000 class—meaning that she displaced 62,000,000 tons. She was equipped with electromagnetic circuits to counterbalance the effects of acceleration as well as those of

gravitation, and she was big enough and complete enough for an inter-universe run if one should ever be established. The only factor that prevented that now. the steward said, was the lack of suitable energy.

Erle drew a deep breath and lit a cigarette. "What is this time-effect of the speed of light," he asked.

The steward connected a magnetic lounge chair. "I'll tell you how it has been explained to me. But you've got to remember I'm no scientist and I don't guarantee anything. When an object moves—anywhere, at any velocity—the atoms in it begin to slow down."

"At the kind of speeds you encounter on a planet the slow down is too small to measure. But as your velocity approaches the speed of light it becomes noticeable—more and more so until at exactly light speed the atomic particles—principally the electrons—stand still. If the atoms that make up a human body slow down, your rate of living slows down. If the atoms go only half as fast, you live only half as fast. In an Earth year you would age only six months."

"Then at exactly light speed we wouldn't grow old at all."

"Theoretically we wouldn't. Actually it is impossible to travel at exactly that speed—but we can go over."

"Then what happens?"

"The spin of the particles is reversed, and you or anything traveling at that speed gets younger." He paused an instant, then went on, "They watch our light-second time very carefully—though it doesn't make a substantial difference unless you're traveling all the time. By the way, I noticed your card. You're normal, aren't you?"

"Yes—sometimes to my regret."

"You won't regret it this time. Come with me." The steward led Erle to the lounge, where a lovely blonde-haired girl was sitting alone. The steward spoke to her. "Miss Castiliano, Mr. Bertron."

She smiled gorgeously. "Won't you sit down?"

She wasn't standing up, but Erle thought she was rather tall for a girl—five feet ten anyway—with beautiful smooth legs of a creamy color that was deepened by pale green shorts.

"You and Miss Castiliano," the steward was saying, "have a great deal in common. You are both normal."

Erle, starting to sit down, looked sharply up at the steward, but he was moving away on the autowalk. Erle looked back at Miss Castiliano. "Two normals?" he asked incredulously.

She smiled. "Two normals."

He was looking into a pair of beautiful green eyes in a face of ivory surmounted by shining platinum blonde hair. The green eyes were smiling, and Erle started to light a cigarette. Then he thought

better of it. "Won't you have a drink?"

She smiled. Her eyes had not left his. "If you wish."

Erle looked into the green eyes again. "So you're normal?"

Her "Yes" was musical.

"Did you," he asked, "once appear in a freak show as a normal human?"

She seemed faintly amused. "Come to think of it, I did. And now that you mention it, that's where I was when somebody picked up my contract—with the Venus Varieties."

"Did you know a Headless Woman?"

Miss Castiliano sipped her drink. Her fingernails were tinted pink. "I ran into her a couple of times—once out around Uranus, I think, and again on Jupiter."

"She said you broke a button loose at the Nine Planets."

She smiled, and every time she did that, it raised his blood pressure ten millimeters. "Maybe I did," she said, "but the binge was deliberate. I got tired of being stared at by a bunch of neurotics who didn't know enough to come in out of the sawdust."

He finished his drink. "I've felt like that," he admitted, "but this is the first time I've heard it in words."

"I know about you," she said. "You've been the blow-off for Greater Galactic for years. I very nearly looked you up when I was in the same town, but thought maybe you'd be a fussy little bald-headed man with glasses and false teeth, and I decided not to risk it." She studied him as she finished her drink. "I was a fool," she said.

He looked at her and took a deep breath. "We're still young," he said, "or have you been rejuvenated about six times?"

"Not me. I'm exactly what you see."

"What I see is lovely."

"My first name is Naomi."

"It sounds nice. What happened when you lost your place in the show?"

"As soon as I got my persecution complex diagnosis, I went out for a job. But naturally nobody trusted me. The neurotics were afraid to have me around. The men were afraid of losing their jobs, and the women were afraid of losing their husbands—everybody defending what little they've got under the laws of society. That seems to be the only strength most of them have."

He paid for the drinks. "Have you seen any freaks on this trips?"

"Not a one," she said slowly.

He thought about it. "Do we have anything in common besides normality?"

"I have absolute pitch."

"And I have absolute motion."

She began to look worried. "It doesn't seem to me that they bought our contracts because we're freaks."

"What do you suppose they want us for then?" he asked.

"I don't know," he said. He looked into her green eyes and took a deep breath.

THE BYRD snuggled down in the cozy warmth of Erle Bertron's mind. There has been nothing like this for a good long time, and if he was lucky he wouldn't have to move again for a couple of hundred years.

The lights were dim. Erle was in his bed but he couldn't sleep. With his eyes wide open in the dark, he kept seeing Miss Castiliano's soft green eyes. She could talk, but she didn't talk all the time. She was normal and so was he.

He wondered if he should tell her the full truth about himself. He'd wait until they knew each other better. He wished the trip to Regulus would last for ten years instead of eight days. He got up and wandered into the lounge. Two humanoids were standing before the big map, apparently exchanging thoughts, for, although no word was spoken, occasionally one would nod or shake his head. Mind-reading was not uncommon in some parts of the galaxy.

Eric walked slowly around the big room. The menus were still illuminated, but the hidden lights were dimmed. Erle sat at the table which he and Naomi had occupied that afternoon. For the first time he noticed there were brilliantly colored macaws—red, yellow, and blue—in the tree tops. But the birds were quiet, and the wall of the lounge was a transparent sheet of something that formed one side of an aquarium.

As he watched, a small brown squid shot up from the depths, fouling the water with an inky discharge, and wrapped its two club-like tentacles around a filmy, almost transparent tropical fish that had been sleepily fanning the water with a long blue tail. The squid reversed itself and shot back to the bottom. The inkiness slowly cleared away, but the small blue fish was gone, and down among the rocks an expanding cloud of mud arose from the movements of the squid.

It was like a bad dream, and Erle shook his head. Then something dropped over him from behind, and he was pulled backward. He tried to free himself by thrashing and kicking, but his movements were not effectual. He had one glimpse of the two humanoids at the map, but they didn't look his way. He seemed to be in a tunnel, pulled backward rapidly and soundlessly. It was like being sucked into a vacuum. Then he was brought up hard against some sort of cushion, and sent sprawling.

A lisping voice said something in no solar language that he had ever heard, and almost simultaneously he felt that intolerable tightening and prickling of the nerves

which accompanies sounds of ultrasonic frequency. The sensation was followed by the goose-pimple noise of a fingernail scraping glass. Finally a command came to his mind—not in words but in abstract thought.

"Get to your feet and follow the light."

He was sitting on the floor. A small green glow appeared in the darkness, and he walked toward it almost automatically. The rustling and scraping continued at his side. Finally the command, "Stop," took form in his mind.

The rustling went ahead. Then suddenly lights blazed all about him. At first he thought he was in a room filled with brown gas, but this clarified. He breathed deeply and was relieved to feel air going into his lungs. He thought he detected the odor of bromine.

An image began to resolve itself before him—the upthrust head of a snake with black velvet scales on its back. He felt that brain-sucking power in his mind, and pulled his eyes away with an effort.

He saw Jastrow.

"What vicious trick is this?" Erle demanded. "You didn't bring that snake on board with you."

The great reptile's vertical eyes seemed to grow larger and larger, closer and closer. But somehow Erle managed to resist the deadly menace of the thing.

"Hypnotism is no good," he heard Jastrow say. "He can't do it when he's hypnotized."

"Do what?" Erle tried to ask, but his voice made no sound.

Something flowed between the snake and Jastrow then. It probably was thought, but it was much too fast for Erle to follow. He squared away at them both. But before he could make his anger felt the snake's forked tongue ran out farther than usual, and a sharp, searing flame touched his nerves. It flashed through his body. It was like a dart of white fire. And when it vanished he found himself on his toes, his body stretched taut.

"Those high-frequency sonics are a little painful sometimes," the snake said. "You will see that we have ways of persuasion. You will note that they leave no visible mark. You could very easily go out of here broken and shattered in mind. But you would have no evidence against us. You would merely be a supposedly normal Earthman who has suddenly turned neurotic."

Erle said finally, "Who is Jastrow?"

The snake's countenance did not change. "He is one of my associates."

Jastrow said, "Are we going to make him work with us?"

"I think so," the snake said. "But of course it must be done delicately. There must be no marks of violence or evidence of any kind."

"That eliminates dismemberment," Jastrow said, and a chill went down Erle's back.

"It also eliminates anything that might destroy his ability to cooperate with us."

The snake turned a little, and seemed to concentrate. For a moment Erle felt nothing. Then, slowly, he began to sweat. It was an odd kind of heat that seemed to come from inside of his bones and radiate out through his flesh. It was like a burning flame in the marrow of his bones.

"Infra-red," said Jastrow. "You like it?"

For a blessed moment Erle blacked out. Then the fire raced along his nerves again and brought him up from the floor. His hands were shaking uncontrollably. He tried to hold his head firm while he looked at the snake. He said hoarsely, "You will gain nothing by torturing me. You've got to have my willing consent or you won't accomplish anything."

The snake's words formed in his mind "We shall see."

Again the heat began to pour into his blood, like a hand with a thousand steel fingers, probing every corner of his mind. So unbearable was the torment that he cried out in agony and lunged at the snake's eyes.

He might as well have hurled himself against a flat steel wall, for his hands could find nothing to take hold of. It could only mean that the snake's body was not in its real body. The scales were not chitin but some kind of metal. It seemed probable that Jastrow, too, had an artificial body which he could cast off at will.

A sonic discharge struck him and knocked him down. He got up and swayed helplessly. The sonic projection came again, a tremendous jolt, and he went down flat on his face. The sonic discharges came with a frequency of about one per millichron.

Erle remained prone, physically helpless, with the snake probing at his brain. Through all his torture he knew they did not want to kill him, and that knowledge stiffened his resistance. From somewhere deep within him, from the ataxic layers of his brain, came a strength that seemed to go beyond the merely physical. He drew it up from wherever it was stored, and he used it against them. It enabled him to resist the cruel, relentless probing. The agony continued but it had no power to bend him to its will. Dully he wondered if they would keep it up forever. He wondered if he would be sane when they got through with him.

Erle realized finally that he was alone. Jastrow and the snake had vanished and he was lying on a glass floor, about which lingered the faint odor of bromine. He lay there for a while, afraid to move for fear that the slightest physical effort would bring back the hurt.

Then he heard Naomi's voice, raised in concern. "It was this way, I'm sure!" He managed to roll over on his back. Footsteps were approaching and he could detect the voices of men, too, and the clicking of metal instruments. He was trying to rise when they found him a few seconds later.

He looked up at Naomi. His throat and mouth were so parched that he was unable to speak. Naomi screamed when she saw him. Two men in white uniforms aproached, and helped him to his feet. Erle looked at Naomi and tried to smile, but she was blurred in his sight and seemed to be swinging back and forth like a pendulum. The heat was leaving his bones, but the instant he moved again an agonizing pain half doubled him up.

"Get him to a doctor!" Naomi whispered urgently. "Hurry."

"Looks like an epileptic attack to me," said one of the men in white.

"It couldn't be," Naomi said indignantly. "He's normal."

"It isn't anything to be ashamed of."

"I didn't say it was. But Mr. Bertron is normal, I tell you."

IT WAS LIKE heaven to lie on the doctor's magnetic couch, although the tapping finger made him want to scream.

"You're badly dehydrated. Had a fever?"

"Not a normal fever. It was something much worse—"

The doctor was looking at his chart. "Had many of these attacks before?"

Erle tightened his lips and said nothing.

The doctor brushed aside his failure to answer. "I see you're rated normal."

"Yes."

"Quite a phenomenon, eh? Well, this is perhaps a little atavistic throwback to some deep-seated neuroticism that hasn't appeared before. Suppose I give you a sedative and you come back tomorrow for a checkup."

There was only one thing, Erle thought, to check on: the nature of his tormentors inside their disguises. But that might prove a very difficult task.

Naomi was waiting outside for him, and she was like a fresh breeze from the ocean. He kissed her, impulsively, and for a moment the wonder of her so close to him blotted out everything else. Then, gradually, he became aware that she was talking to him in an earnest, solicitous voice.

"I missed you yesterday and then I began to hear that strange sound at about forty-one thousand vibrations per second. You know I have absolute pitch?"

"Yes."

"I told the steward about the sound, but he insinuated I was neurotic." Her green eyes flashed.

"I argued the sound indicated something unusual, but nobody else could hear it because of the high frequency."

"Don't they have sonic detectors?"

"That's what I asked, but they put me off. Of course normal human ears seldom hear over twenty thousand vibrations."

"I'm glad it was you who heard it," Erle said.

"All this was yesterday. I made so much fuss that the steward got two assistants and went with me. I traced it to where we found you."

"You probably saved my life—if not my sanity. But isn't it miraculous that you, who are probably one out of millions with supersonic hearing, was on board?"

"I think," she said, "it's miraculous that we are both on board together." She frowned a little. "Aren't those goose bumps on your arms?"

He nodded. "You're pretty when you frown, but you're beautiful when you smile. Let's see you be beautiful."

At last the Byrd could turn over and settle down. Those damned Alphirkians, in their fantastic disguises! For a while the Byrd had been tempted to take a hand, but it had gotten along very nicely for quite a while on its cardinal principle of minding its own business. Erle Bertron had survived and in addition had learned something that eventually would be of value to the metagalaxy, with no interference from the Byrd.

VII

ERLE FINISHED THE trip to Regulus in a sort of golden haze, from which now and then appeared a pair of eyes, sea green and sea deep, that looked long and questioningly into his.

They were two normal persons neither of whom had ever before talked to a normal person. Besides, they were both perfect physical specimens, and the result was something like the force that holds the atomic nucleus together.

The steward cleared his throat with considerable violence. "I guess you two didn't hear the warning bell."

Naomi, dawdling over a Metagalactic fizz, smiled at the steward. Erle said, "I guess not." Then he straightened. "Did you say 'warning bell'?"

"Yes, we've been picked up by the tractor ray, and we will be down in eight or ten chronos. But it probably will take you most of the day to get cleared." Erle was worried when he turned to Naomi. "Here we're both going to be in Regulus City, which has a population of eight or ten billion, and we both have different addresses, and now when we've just become acquainted we'll have to separate. How can we find each other again?"

"We'll be back on Earth eventually," Naomi said. "Suppose we both get in touch with Greater Galactic."

"It may be a long time. What do you suppose they want us for in Regulus City?"

She shook her platinum blond head. "I don't know. There aren't any other freaks—unless they are from other planets. And the strange thing is that you and I aren't really freaks. Don't tell me the metagalactic officials don't know that!"

"I'm sure they do." He put his diagnosis card back in his paper-thin billfold.

"Maybe some metagalactic anthropologist is preparing an encyclopedia of life forms in the universe, and we're going to be examples of humans. It's distinctly possible, you know."

A glowing violet light appeared in the ceiling. "I guess that means we've landed," said Erle.

She stood up, tall and slim and incredibly beautiful. "We might as well go down together," Erle said.

"Okay, Mr. Normal Male." She took his arm.

He paused for an instant. Other Earth-people were hurrying past them on both sides, but Erle stopped her. "Just say the word and I'll buy you a mountain with a big yellow moon."

Amusement tinkled in Naomi's voice. "Are you trying to high-pressure me?"

"We'll have to go," he said softly.

They took the autowalk to the elevator. It was crowded, and she had to turn sidewise to him. "Think," she whispered. "The Solar System was so big we never made the same show. Earth was so big we were only in the same town once. But out here on Regulus, two hundred light-years from home, we found each other *just like that.*" She snapped her fingers.

He smiled down at her. "It's a small universe, isn't it?"

There was a great ramp sloping down. Naomi swayed and covered her mouth with her slim white fingers. "Fire!" she exclaimed. "The world's on fire!"

Erle stared at the walls of the great dome they had entered. This was larger than the one on Procyon, and in every direction without a break was a solid bank of blue flames. Fire—twisting, turning, writhing, sweeping in great loops and masses of leaping flames. It was blue, and there was no break in it. Like water, it churned and swirled, and they seemed immersed in it.

Erle looked at Naomi's white face and back at the tremendous pressure of the fire. "We landed on a sun," he said slowly. "A blue star—the double or triple companion of Regulus. Probably a small star but a hot one. Blue indicates a surface temperature of

around twenty thousand degrees Centigrade."

"But why?"

"Probably for safety. What kind of being could come through this heat without a lot of preparation?"

"The dome must be a perfect insulator."

"Either that, or they use the heat for refrigeration."

"Isn't a sun a ball of gas? How would they anchor a city here?"

"A servo-controlled balance among gravity, centrifugal force, and the pressure of the burning gas."

Naomi shuddered. "What if something went wrong—just for an instant?"

A voice came from a loud speaker. "Earth-people will please present their papers at the Blue Window."

They got in line. Naomi put her papers on the glass counter. They were stamped in strange characters and pushed back to her, along with a graceful pair of glass shoes. "You will please take the yellow lane and follow the directions given you by the shoes. As long as you use these, you cannot be lost in the city."

Naomi stood for a moment, waiting for Erle to get his papers stamped. He also received a pair of directional shoes. "You will take the pink lane, Mr. Bertron."

Erle turned out of the line and stopped beside Naomi.

"I'm frightened," she said, and tried to laugh. "It's so far from home."

"There's nothing to be afraid of," he assured her. "Let's get our jobs finished, and then we'll get in touch through Greater Galactic if there is no other way. In the meantime, I'll get in touch with you the first minute I can. Only—I'm dubious. They seem to run things their own way out here."

The sea-green eyes looked into his. "All right," she said. She turned and went through the yellow gate and got on the autowalk. She waved once and was gone.

Erle could see Naomi no longer. He found the pink gate and stepped on the walk.

Regulus City was a great sphere of life, motion, activity. On every side it stretched beyond the limit of his eyesight, and both above and below were innumerable levels, with moving walks—narrow ones for people, wide ones for freight; slow ones and fast ones; walks of all colors, that curved to left and right and up and down—a vast maze of motion, in which color was the only universal language. What, Erle wondered, would they do with a person whose eyes were sensitive only to ultraviolet?

The pink lane began to slant downward, and the blue fire became no longer visible. He was deep inside the city. Presently he approached a crosswalk, and a voice from his shoes said, "Mr.

Bertron, you will please take the green walk to your right."

He changed. The green walk descended more rapidly. Its speed, he estimated, was about half the speed of a sun-powered autocar on the elevated cross-continent highways of Earth. The many lights around him began to blur. Down, down, while he wondered where Naomi was and when they would both get back to Earth. And—he had to admit it—even neurotic Earth sounded good to him now.

The next day he was delivered into a small room that gave a first impression of being alive, for waving bands of pastel colors arose from the floor and pursued one another up the walls to a black ceiling that showed the twinkling lights of the Milky Way.

This room was singularly bare of furnishings. A lounge of some strange material faced a plain flat table that seemed to have no legs, but was projected from the wall. Beyond these items, however, the room was filled with a vitality of thoughts and feelings almost substantial enough to touch.

Erle stopped. Above the small table was the same purple ball that had come into the sideshow of Greater Galactic. It was as he remembered it — about two feet in diameter, topped with a tiny aerial, and on its front the diamond-incrusted insignia of the banded heavens.

Strange-sounding words came from the aerial. "Please sit down, Mr. Bertron. Make yourself comfortable on the lounge."

Erle stared at the fabulous designation of the meta-galaxy.

When he had first seen the purple ball in the carnival tent, he had experienced great excitement, for he had felt himself to be in an awesome presence. But now as he faced that presence in Regulus City, the truth dawned upon him with overwhelming clarity.

He was in the *headquarters* of the intergalactic system!

He had been compulsively summoned and had travelled a great many light-years for one purpose only—to stand in this room and talk face to face with the august ruler of the metagalaxy.

This was no ordinary encounter. It was breath-taking and awe-inspiring, and it was made more so by the very power and dignity with which the atmosphere was charged.

He needed to sit down when he was invited to do so. He was weak with the realization that he was in the actual presence of the being whose will was law throughout the entire metagalaxy.

"Sit down, Erle," the invitation came again.

For a moment Erle stared, still hardly believing. Then he looked behind him.

"Anywhere," said the purple ball. "The currents will find you."

Erle tried it—gingerly—and felt

resistance. He let his muscles relax and sat back.

The purple ball descended several feet—apparently to be on a level with his head. It floated there while the voice said, "Before I came here I was a line officer in the metagalactic space fleet. If you will think of me as such, I'm quite sure you'll feel more at ease."

"Very well, sir. I'll confess that all of this has shaken me up a bit. Perhaps 'unnerved' would be as good a word as any."

"Make yourself comfortable. I have a story to tell you. It is important to the metagalaxy, perhaps to the Fourth Universe. Undoubtedly you have realized by this time that you are not here as a freak, and I assume you have been puzzled as to what other reason might be responsible for this long and expensive trip."

Each word had an earnest ring.

Erle nodded, deciding that he had perhaps already said too much.

The purple ball paused, then went on quickly, "You might have been told before, but I felt it better for you not to know."

Erle thought of his tortured hours with Jastrow and the 'snake,' and said, "I think you were right."

If the general was aware of his thoughts he gave no sign. "The metagalaxy is up against an age-old problem—one that has vexed universes, galaxies, and planets since the Beginning. That is the need for power."

Erle looked startled. "Power? I thought—"

"Take power at a planetary level. In Earth's past you have depended on such primitive energy sources as coal, oil, wood, uranium. Such sources have been extremely expensive."

"We use sunpower now."

"In your history, as in the history of every planet, there have been many crises over the lack of energy. Sources have been there, but they have required inordinate expenditure of human energy to transform them into mechanical energy. Isn't it true that whole populations have died of starvation for lack of cheap transportation? One part of your Earth would have a surplus of food, while other parts would have none—and there was no one with authority or energy available to distribute these foods and make them equally available to all."

"Not within my time."

"Possibly not," the general conceded. "Now you are drawing on sunpower. But when the radiating force of the Sun begins to dwindle, what then?"

"That will be several billion years," Erle said and looked up at the ceiling.

"The universe is heading steadily toward entropy—a running down of all energy everywhere. Some call it chaos, some call it perfect order. It makes no difference, for the result is the same. All the atoms of

the universe will be perfectly distributed in such a fashion that we shall not be able to extract more energy from any of them."

"I didn't realize power was so important."

"Energy is the great theme of the universe. Without energy, there will be no life, no stars, no movement of any kind—nothing but a cool glow from the entire universe. There will be nothing solid, for all atoms will be perfectly distributed."

I should imagine it would be a pretty big job to find energy for the whole universe."

"Yes—but not hopeless, as you will see. In the meantime, some citizens of the Second Metagalaxy are taking advantage of this lack of energy to win political power."

"You mean a cold war?"

The tiny aerial seemed to nod. "Incredible as it may seem, the directorship of the metagalaxy is engaged in a silent struggle with the Forty-third Galaxy of Alphirk. The Forty-third is spending vast amounts of energy to make other planets and galaxies dependent on them, and when the time is suitable they will come out in the open. If such a time comes, we shall find them in control of most of the energy sources, and we shall be compelled to accept their terms. This very city, for instance, requires a use of energy that to us now seems extravagant, since the Second Law of Thermodynamics appears to operate implacably.

"Matter is constantly being turned into energy, which is being squandered as radiation—radiation which for the most part we are powerless to convert into energy. The law also says that the equation is irreversible—that energy cannot be re-converted into matter. Pursued to its ultimate, that means that eventually there will be no matter, hence no life and no universe."

"And the metagalaxy is trying to do something about that?"

"We have always planned on the vastest imaginable scale, but now our plans are of little value. The Alphirkians, not interested in the distant future, are making every effort to upset the economy of the metagalaxy by getting control of the comparatively meager supplies of energy that remain."

Erle was still puzzled. "But on Earth we use water power," he said. "Water falls toward the sea, and turns a wheel that generates electricity."

"What gets the water to a place above the generator?" the general asked.

"Rain, I suppose."

"And what makes rain possible?"

"Well—sunlight."

"Exactly. Energy in the form of radiation from the sun. When the sun cools, there will be no more rain on Earth, and you will have

no more water power, no more electricity, no more sunpower."

"It begins to look as if the Alphirkians are wasting the energy resources of the universe."

"That's the tragic part of it. This reckless use of energy has to come to an end. Before it does, I think we may assume that the Alphirkians will take over the metagalactic government—and I think we are safe in saying their motives are not altruistic. Nothing we know about them points in that direction."

The purple ball seemed to look up. "Have you ever seen metagalactic war? It's an incredible waste of energy. Fleets of ships gasefied in an instant, worlds blown apart, stars turned into supernovae, trillions of life forms wiped out."

The voice lowered. "I have seen metagalactic war. I was present at the great battle about the year eighty-five thousand, when Frode Rockman, the only Earthman ever to attain metagalactic rank, beat off the invasion fleet of Mondobex and his insect hordes from the Greater Magellanic Cloud. I saw a battle fought over an area as big as a galaxy. I saw the lower heavens lighted up by the most furious blaze of radiation ever exhibited in the Fourth Universe. All that energy was lost forever—energy that would go far toward supplying the shortages that now exist."

Erle was silent.

"I have talked at length because I want you to know the situation. Your good will is necessary if you are to be of value to us."

"I don't quite see—"

"I want you to know that if the Alphirkians do try to take over, we shall have another metagalactic war, and a tremendous amount of energy will again be lost. War will mean nothing but fewer privileges for those already underprivileged."

"Do you care," asked Erle, "who actually runs the metagalaxy?"

"We have asked ourselves that question many times." Remiggon paused. "The answer is that we are willing for anyone to control the metagalaxy who will control it unselfishly."

Suddenly Remiggon sounded tired. "There is only a certain amount of energy available in the universe. When that is gone, no matter who is in control, we shall have entropy. In other words, when war comes, that in itself will be an indication that the Alphirkians are running out of energy. It is a very vital problem, for energy is the theme of the universe."

He paused once more, very briefly this time, and then went on. "We have developed the hyperdrive, the solar drive, the ultradrive, the sixth-dimension Schweickhard drive, the pluperfect vacuum impulsive thrust—I could go on for days."

Erle said soberly, "Yes, sir."

"In short," said the general,

"here we can do anything but make energy out of stray radiation. It is more tragic because we are not a run-down universe. The Fourth is young compared to the incredibly ancient Second that lies below Achernar. Nevertheless, our energy requirements are far greater than our supply. I am told that other metagalaxies do not have this problem, that it must be due to some terrific driving force that has centered on us."

Erle was staring at the purple ball. Abruptly it revolved, and he knew the general was looking at him. "You are wondering about me," the general said, "and I will tell you. If you could open this ball—which would be something of a project, for we are practically indestructible—you would find a few whiffs of odorless, colorless gas. Yet that gas thinks and talks. It has emotions. It plans and it worries. It has a great deal of knowledge and experience, but it is not all-powerful. That is why you are here, Erle Bertron. We believe you may be able to do something we cannot do."

Erle said with a slight tremor in his voice, "I don't see how."

Remiggon looked at him for a moment, as if speculating, and then said, "Follow me."

VIII

ON AN AUTOWALK they traveled through the laboratory, kilometer after kilometer. Occasionally they came up to invisible, reflectionless glass walls, apparently keyed to the general's voice, for after a few words that sounded to Erle like, "Cucumber, cucumber, strawberries and gravy," a section would slide up and allow them to go through.

Finally the general stopped before a white porcelain door. "This is the conference," he said, "the governing body of the Second Metagalaxy. Don't be alarmed."

He nodded reassuringly.

The door dissolved. The general floated through, and Erle followed. They stopped, and suddenly around them, as if they had formed from the air, floated half a dozen purple balls and sat half a dozen humanoids—the fabulous metagalactic conference, the most powerful governing body in the universe of stars.

The general was speaking, "Gentlemen, I have Erle Bertron with me."

"He has the gift of absolute motion?" asked a silkily rustling voice.

"He is said to have it," the general answered. "As I reported in my neutrogram, I did not think it advisable to call attention by testing him. I do not vouch for his gift. I merely say that he is ready for testing."

A heavy, impatient voice came from the transmuter of a Regulian. "Let's find out."

"Will the engineers expand the room?"

There was a whispering sound as the walls of the chamber receded. The ceiling went up out of sight, and the floor around them shrank away, leaving the conference sitting on a small circle of floor in the center of a very large globular area.

A humanoid buckled a strap around Erle's neck and suspended on his chest an instrument panel that held dials and lights and gauges.

"Now," said the Regulian with the heavy voice, "you will press the red button and float to the center of this sphere. We are considerably below the center, so you will ascend. Are you ready?"

Erle took a deep breath. "Yes, sir, I am ready."

Erle was braced for a shock, but it didn't come. He just quietly floated up until he was three or four thousand feet above them. There he stopped, with nothing tangible to hold onto.

"You won't fall," said the general's voice from one of the instruments on his chest. "Don't be afraid to move."

Erle took another deep breath.

"Now," the heavy voice said, "the panel is a relay for power to move you for a short distance. Also there is a very sensitive encephalo-pickup and amplifying device. If you can 'tune in' to absolute motion, the device will transfer your conscious or instinctive knowledge into physical reality.

"In other words, when you reach the conclusion that you are in tune, your body will be locked in that relationship and you will remain at absolute rest while your surroundings here will demonstrate the rotation and revolution, drift, and any erratic movements, such as nutation, precession, and so on —whether of the star, the galaxy, the metagalaxy, or the universe itself. Do you understand all that?"

"Yes. My body will stay parallel with the seat of absolute motion and will travel in its same direction at the same velocity."

"Very good—except for the velocity. Since the velocity may be considerable, perhaps even approximating the speed of light, and since our space here is limited, we are going to start with an extremely low power—about one millionth of the energy potential necessary to duplicate actual velocities. Also you will be stopped automatically if there is danger. All set?"

"I'm set," said Erle. He hoped this would not fail, but he had no way of knowing. The scientists on Earth had checked him, but their verdict had been based on microscopic evidence, and, now that he was in a spot where so much depended on it, he was scared.

The lights suddenly went out. Erle was suspended in total blackness, his temples throbbing.

"The power is on. When you have decided the direction and velocity of absolute motion, your decision will be translated into movement. Go ahead."

Erle tightened his lips. He closed his eyes against the dark and began to concentrate. At first he saw Naomi with her platinum hair and her sea-green eyes, but he had to put her out of his mind. He began to relax, and then he felt it coming—a sort of mental convolution that always made him think of folding his mind in against himself, and blocking out everything except one vital perception—that of motion. Absolute motion — motion that came to him from a tremendous distance.

He felt himself go into a semi-trance, and that, he knew, was right. With his mind he began to reach, to grope in the dark, not looking for a movement of things but a movement of forces. He began to feel the nearness of the vital perception—as a man sometimes knows he is about to walk into a wall in the dark. It came closer until it was almost tangible, until it felt like air currents flowing around him in the blackness.

He had now lost all sense of direction. There was no feeling of standing up or of lying down. He tested the currents of force with his mind. They were the force he had always felt. He relaxed still further, and let his mind go with the force. Abruptly the currents no longer flowed around him, and he knew he was moving with them.

This seemed to go on for a long time, like a pleasant, dreamless sleep. Then abruptly the lights came on.

Erle looked down. The tiny circular floor that held the metagalactic conference was no longer beneath him.

"Very good, Mr. Bertron. Are you ready to try it again?"

"Yes, I'm ready." He wanted to know if they had been able to tell anything, if they were hopeful or disappointed. But he could tell nothing from the toneless voice, and he did not ask.

He found himself floating upward to his left and to his rear. He reached the level of the conference and passed it, going on up to what must have been his former position.

"The coordinates are the same," said the general. The lights went out. He felt himself spun about and then tumbled. "At your leisure, Mr. Bertron."

Erle stretched out and closed his eyes again. This time the force-currents came faster. He swung into them, took hold of them, and floated with them. He seemed to move faster.

Again the lights went up. Again he was below the conference. Again he floated back into position.

On the ninth try he failed. "I'm tired," he said.

"Understandable," said the general.

Erle floated back to the center of the circular floor. A long roll of graph paper was on the desk in front of the purple ball with the heavy voice. "You may be pleased to know our observations indicate that you are aligning yourself with the same motion every time. Your velocity and direction were identical and constant. Whether your alignment is with the absolute motion that we seek, we cannot know until the engineers have thoroughly checked the graphs."

They began to talk among themselves, in sounds that obviously did not have their origin in any human throat. Presently the question was asked Erle, "Can you repeat this demonstration tomorrow, Mr. Bertron?"

"I think so."

"You will be conducted to your quarters by General Remiggon. And I hope you will not take this amiss: you will be well guarded, Mr. Bertron. You have become potentially the most valuable property in the Second Metagalaxy."

Erle hesitated. "It might be something else I'm tuning in on."

"Don't worry about that, Mr. Bertron. Our engineers will find out."

"But I'm normal."

The general chuckled. "It is one of the delightful idiocies of Earth civilization that it is commonly thought the great gifts of talent are given only to neurotics. It was an idea started by the neurotics themselves, and fostered by others who did not understand talents that were beyond them. But I can tell you this: the very finest talent discoverable is a normal entity. Give him intelligence and drive, and you have a combination that no neurotic can hope to equal. Now let's have no more nonsense."

The purple ball revolved from side to side as if the general was shaking his head. "You do your job. Let *us* decide how good a job it is."

The walls closed in, the floor came up, the ceiling descended. Erle folowed the general to his quarters. "It is a little miraculous," the general said, "that a normal person like you could have developed on such a strange planet as Earth."

Erle made no comment.

Half a dozen purple balls waited outside. The general indicated them. "They have a rather astonishing set of perceptive faculties and an unusual assortment of weapons. I doubt that any harm can come to you as long as you are in this city."

Erle asked one question. "Do you have reason to believe that anyone knows why I am here?"

The general evaded. "Regulus City is filled with entities from the entire metagalaxy. Some of them have unusual powers—and we do not want to take a chance. By the

way, you will be staying with Admiral Blomberg."

So if the Regulians knew about the two who had appeared to him as Jastrow and the snake, and who had tortured him for two days, they were not saying. Erle wondered. The snake and Jastrow were not in their right forms, so he wouldn't recognize them when he met them. One of them might even be on the metagalactic conference. Remiggon himself—who knew?

SHE SCARED HIM—this Marissa, Admiral Blomberg's wife. She constantly watched him with the air of having found someone she adored . . .

"It's getting easier," Erle said after the sixth day of tests.

The heavy-voiced Regulian seemed almost to have a smile in his voice. "That is what we have been waiting to hear. Our astronomers believe that you do have absolute motion—though we have tried everything possible to confuse you. We have tilted this room. We have revolved it at a fantastic speed and we have even turned it upside down. But you have always moved in the same direction and at the same velocity."

General Remiggon told him to go back to his quarters and await their call . . .

Blomberg and Erle got out of sound of the tri-di, much to Marissa's disgust, and talked things over. Finally, one day, a message came from Remiggon for them both to appear at metagalactic headquarters.

The purple ball seemed filled with confidence. "You will both be glad to know," said the odd voice from the aerial, "that our astrodynamicists have concluded that Mr. Bertron does indeed have a sense of absolute motion. Naturally you know, Mr. Bertron, that we want to use that sense. It is a very rare gift, and it is quite possible that you are the only individual in the universe who has it."

"I will do everything I can," said Erle.

"One thing puzzles me," the general confessed. "I had expected the Alphirkians to make some move in your direction before this time, but your guards report no indication of it."

"What does an Alphrikian look like?" asked Erle.

"We are not sure. They are a secretive race and they have the ability to assume a great variety of disguises."

"You've had intelligence men in there?"

"Strangely enough, no. Their work is all done by androids—similar to robots but more humanoid in structure. These androids act as personal servants for the Alphirkians, and so far it has been impossible to get an agent close enough to find out what the Alphirkians are like. We know quite a bit about their operations.

But we still have no information about them personally.

He decided to reveal what he knew. "I was kidnaped and tortured on the *Infinity* by a humanoid and a giant snake."

The general was quite still for an instant. Then he said sharply, "Were these the two who were next to your tent in Greater Galactic?"

"Yes."

The general sighed. "I'm afraid they evaded us. I was advised that those two were suspected of being Alphirkian, but they had done nothing and so we could not examine them. But now you say they were on the *Infinity*?"

"Yes."

Erle could imagine the general was frowning. "We have trouble keeping up with them. They must have embarked as two humanoids and later changed to the snake disguise."

The general sank to the level of the desk. "Two Alphirkians made up as humanoids left Regulus City yesterday shortly after I received a final report on your tests. I do not think that happened by chance."

"What will be their next move?" asked Admiral Blomberg.

"I'm not sure. It would seem they know about the tests—but do they have an engine that can turn the sense of absolute motion into power?"

"It wouldn't make any difference," Blomberg pointed out. "To them the most important thing is keeping this energy from the metagalaxy."

The purple ball rose abruptly. "We're fools," he said. "If they know about Erle, they know about the *Drifter*. All they have to do is wait for Erle to get on board. They then can capture the *Drifter* with Erle and the engine too."

"Speed of escape!" exclaimed Blomberg.

"Very well." The general was business-like again. "Takeoff time for the *Drifter* is set for six days from now. Watch your step, both of you. Be ready to move, admiral. It will be better for you and your wife to go along, since you are from Erle's planet."

"Yes, sir."

"Meantime, Erle, you will continue to stay at the admiral's apartment."

ON THE SECOND day the admiral left early in the morning. Erle slept late, as he had done at the carnival. Then the visicom buzzed, and Blomberg's round face with the calm blue eyes appeared.

"Can you get to General Remiggon's headquarters right away—and bring Marissa?"

Erle sensed the urgency in his voice. "Right away, sir," he said.

Marissa was quite gay as they went up from the 110th level. "It's the first time anything has happened around here," she said. Later, she waited in the reception

room while Erle and the admiral went in General Remiggon's office.

"We have made arrangements," the general said, "for the test ship to leave in exactly fourteen chronos."

"I thought—" began Erle, but he caught Blomberg's eyes on him and didn't finish.

"There will be no opportunity to pack. You will all leave at once for Air lock fifty-eight. The guides will escort you to the gate. The mother ship is the *Nucleonic,* a scout carrier." The ball rose higher. "You will find Yjul, the inventor of the absolute-motion engine, and his wife, Fyllath, and your test pilot, Ekno, already on board."

The general suddenly disappeared. Then his voice came from a distance. "You will please take the green lane to Pier fifty-eight at once."

Blomberg got up and nodded at Erle. "That sounded like an order."

They went out through the reception room. Erle caught the general's voice faintly saying, "Good luck!"

IX

UNDER HEAVY GUARD, they went into the mother ship. The guards left, and then they entered the test ship. Yjul and Fyllath quietly introduced themselves, and Yjul said, "There is one member of the ship's company whom you have met, Mr. Bertron."

Erle followed him. Marissa walked closely at his side, her hand under his arm. There was unmistakable warmth and admiration in her eyes, and her manner was proprietory. The admiral walked ahead of them.

Yjul's leafy arms rustled as he led the way to a dark corner at one side of the control room, and Erle stared at the blonde hair and sea-green eyes of Naomi Castiliano.

"Naomi!" He started forward happily, but her unfriendly eyes held him back, and he was suddenly uncomfortably aware of Marissa beside him.

"Oh, you know each other!" Marissa said. "How nice." Her eyes hardly noticed Naomi, she was so intent on keeping them on Erle.

"It's so good to see you," Erle said.

Naomi looked slantwise at Marissa. "I trust your stay in Regulus City has been pleasant," she answered, her voice coldly polite.

"Oh, yes—well—" He introduced the two women and was careful to emphasize that Marissa was Mrs. Blomberg. But for some reason this information seemed only to deepen the scorn in Naomi's flashing eyes.

"I suggest, dear," said the admiral, "that you and I go to look over the ship while Erle and Miss Castiliano renew their friendship."

"I'm sure there will be plenty of time for that later," said Marissa. "Why don't we *all* inspect the ship. You want to see it, don't you Erle?"

"Well, I—" He looked at the admiral, who was regarding him bleakly. Then his eyes sought out Naomi, whose gaze was stony. He looked at Marissa almost with relief. She was somehow managing to be bright and gay and charming and to ignore his own irresolution. "Yes, of course I want to see the ship—" He let it drop there. What else could he say or do before an audience?

Then Marissa insisted on a game of cards, which lasted until Naomi pleaded a headache and withdrew to her room before Erle had a chance to speak to her. Marissa mixed the three of them a drink.

"How wonderful that you can meet an old friend in a faraway place like this!" she said. "Have you known Miss Castiliano long?"

"Yes. Well, since I met her on the *Infinity* coming to Regulus City. But in a way, you see, Miss Castiliano and I have really known each other much longer. We were associated professionally."

"You mean she's a freak?" Marissa exclaimed triumphantly. "I never would have guessed it."

"There's nothing wrong with Naomi," Erle said quickly. "She's quite normal. That is, she is *entirely* normal—like me."

The admiral was blowing smoke rings from his cigar. "I'm afraid that's more than you can say for us, dear."

Erle finished his drink and went to bed. He didn't sleep well that night, knowing what Naomi must think. Nor did he quite know how to squelch Marissa. After all, she was the admiral's wife.

The next day, out in space, dropping down through the sparsely starred regions of the southern skies, Erle and Naomi were finally alone. The admiral was talking to Ekno and examining the stellar navigational atlas. Marissa was asleep.

Erle turned to Naomi. "How did you get here?" he asked, his eyes taking in every movement she made.

She smiled and stretched like a lazy lioness, her tawny legs long and beautiful. "On those little walks, directed by the glass shoes."

"It's been two weeks since we reached Metagalactic City," Erle said. "Tell me what you've been doing."

"Nothing startling. They picked me to come because I was normal, and because I had absolute pitch, which they thought might be cultivated into absolute motion. But it wasn't successful."

Erle drew on a cigarette. "And now?"

"As I understand it," she said, "among many races in the universe it is the rule that the female is as

strong as the male. I think perhaps the general, knowing the bisexuality of humans, had a quaint idea that you would be better able to do your work with a woman around." She blew a cloud of smoke to the ceiling. "I'm sure it never occurred to him that humans might be *tri*sexual."

Erle's features darkened. "Naomi, you're acting like a brat."

She unleased the fire of her sea-green eyes on him. "You said a lot of sweet things, and I fell for them. But I know now you were only warming up."

"That's not the truth. The Blomberg situation isn't what you think it is."

"I wonder if Admiral Blomberg would agree with you."

"I don't understand you, Naomi. You'd think—"

"I *do* hope you've managed to entertain each other," said Marissa, coming suddenly into the room. She sank into her chair. "Oh dear, I forgot my cigarettes. Erle, will you get them, please?"

In a few minutes he came back and tossed them in front of her. He was watching Naomi, startled by the hatred in her sea-green eyes.

"I've got to see Yjul about the test," he said, and went toward the admiral.

Fyllath was standing at one side, watching the instruments.

"I was telling the admiral," said Yjul in his buzzing voice, "that about this time tomorrow—your tomorrow, that is—we'll be five hundred or so light-years from Regulus in a section of the metagalaxy where there is no scheduled traffic. The star density down here is low, and we'll have room to maneuver. We should pass slightly south of the Sink, a blackout space—probably a cloud of ionized magnesium gas."

"We're away from the carrier now?" asked Blomberg.

"Yes," Yjul said. "She will stand off a couple of light minutes while we maneuver."

"And no weapons." Blomberg frowned.

"What if we get lost from the mother ship?" asked Naomi.

"Not much chance of that," Yjul said softly. "However, we have a standby atomic engine and a limited quantity of fuel."

Marissa complained, "I wish we had some music."

"I suggest you all go to bed," said Yjul. "By the time you awaken, we shall be in position to try for alignment."

THEY HAD FINISHED eating the next morning when Yjul sat Erle in a chair before a bank of dials. "I'll strap these instruments to your wrists. Essentially this is the same machine they used to test you, but this one is far more sensitive." He stopped and seemed to shake himself.

Erle asked, "Something wrong?"

"A little headache," said Yjul.

"I'm afraid this one isn't that simple. I got it years ago, working on this sail apparatus. I don't suppose it will leave me until it gets settled one way or another."

He finished plugging in the jacks. "Now you are free to concentrate at your leisure. When you get yourself in tune with absolute motion, the encephalo pickup and amplifier will align the sail automatically."

"Is it absolute motion or absolute rest?" asked Marissa, leaning over Erle's shoulder.

"They are the same," Yjul answered softly. "Absolute rest is a hypothetical place in stasis. It could be absolute for the Fourth Universe—the seat of the twenty-fifth dimension, if you wish to refer to your own dimensional mechanics—and not so for the Cosmos. So it's rather a paradox. It goes back to relativity, Madam Blomberg."

Marissa looked brightly uninterested. "I think," she announced, "that we all need a drink."

Yjul said, "Do you wish a drink, Mr. Bertron?"

Erle turned to see Naomi settling down at the table where she could watch the screen. "No," Erle said, "I don't."

"We are eighty-five light-seconds from the carrier," said Ekno, "and they are now paralleling us."

"Fine," said Yjul. "Whenever you are ready, Mr. Bertron."

The lights abruptly went out, and there remained only a couple of dozen pilot lights on the instrument panel. Everything was very still for a moment. Ekno stood unmoving in his pilot's horseshoe. Erle was just beginning to let go when he heard Marissa say something to Naomi in a voice too low for him to distinguish the words, but loud enough for him to wonder what she was saying.

Then he became annoyed because he was allowing her to upset him. He sat back and tried to put Marissa and Naomi out of his mind—to recover that queer rushing around him, as of black, weightless water, to find himself caught up in it and carried along so that there would be no sense of external motion. When that happened, he would be "in tune," and the primal power of the universe would flow through the engine of the *Drifter*. He remained there quietly, concentrating, forgetting, concentrating. Even the instrument panel lights winked out.

He sat there for at least a chrono, and then another. Finally he asked, "Will it have to be a stronger impulse than I experienced in the test room?"

"By no means," Yjul said softly. "With one tenth of the mental force you showed in the tests, you will be able to align us. With a good strong impulse it won't take more than a few millichrons—about one fifteenth as long as you held alignment in your tests."

Erle sat back again. He closed his eyes and tried to concentrate. But he finally realized that it was no use, and gave up the attempt.

"You might as well turn on the lights," he said. "I can't get it at all."

The lights came on. "You'll probably have better luck this afternoon," Yjul said.

"I don't want to be temperamental about this, but somehow —" He tightened his lips. "I could always detect it until I got tired."

"The surroundings are strange," Fyllath suggested. "Perhaps if you had a little more time—"

Erle stared at her and wondered if she was reading his mind. Or was it only feminine intuition?

"Never mind," said Yjul. "I will notify the mother ship." He shuffled over to Ekno, and Erle heard Ekno's low, buzzing voice, "I was in communication with the mother ship when we started the test. But apparently the contact has been broken."

Yjul stood like a statue for an instant. He asked, "Are we still at the same distance?"

"Plus or minus a few light-seconds—yes."

"Our beam will carry at least twenty light-minutes—and the mother ship's transmitter can reach us from anywhere in the Fourth Universe, unless—" He let the sentence trail off.

One of Ekno's tentacles was pressing a small button. "No response," he announced.

"How about vision?" asked Erle. "Is the *Nucleonic* still in sight?"

Ekno pointed to the screen. The background was dense black, but the *Nucleonic,* outlined by rows of glowing lights along her sleek sides, filled up most of the space.

"Sixteen million miles away," Erle noted. "It's odd they don't answer. There must be a breakdown."

Yjul shook his upper fronds. "Not on the *Nucleonic*. She has duplicate communication facilities, anyway."

The feeling of catastrophe grew on Erle and seemed to spread through the control room. Naomi and Marissa and the admiral all came to watch. Marissa said brightly, "Don't tell me you have failed to tune in on the Mysterium Magnum."

Naomi said, "It makes my scalp prickle. There's something strange going on. I wonder if—"

She didn't finish. The screen suddenly filled with a blinding white light. Erle swung away from it. Naomi covered her eyes with her hands.

Ekno said quietly, "The *Nucleonic* has exploded. That's why I couldn't raise her. The light-waves of the explosion had not reached here yet, but the *Nucleonic* had already ceased to exist."

Blomberg, narrow-eyed, said,

"That leaves us down here on our own."

"For the present—yes," Ekno said.

The screen now was filled with roily yellow and red flames and great clouds of soot. Naomi was standing close to Erle. No one said a word while the red and yellow flames folded in upon one another and suddenly winked out, leaving the screen dark.

X

"IT WAS a nuclear explosion," Yjul said soberly. "The entire ship and crew were gasefied instantly."

"Do you think something happened to her store of stygium?" Blomberg asked.

"Not from the inside," said Yjul. "Her atom stores were quadruply guarded. There is only one explanation—an attack from another ship."

"What other ship?" asked Blomberg.

"There need be no speculation over that," said Yjul. "Only one life-form in the Fourth Universe has both the desire and the resources to build such weapons, and the courage to use them to make a direct attack on a metagalactic ship."

"You mean the Alphirkians. They followed us under blackout."

"Stand by, *Drifter!*" said a sibilant voice.

They looked at the screen. Now there was a luminous background, but in place of the *Nucleonic* was the triangular head that had reared up in the snake show at Greater Galactic. The velvet black scales on the top of the great reptile's head and down the sides of its neck showed glossy in the screen. The under side of its throat was yellow. The eyes were black and the slits vertical.

"Stand by," Volmik repeated. "We are going to board you."

One of Ekno's tentacles shot at a button. "I've cut off all broadcast from the *Drifter,*" he said. "We're blacked out, coasting through space at five hundred Gs. I doubt that they can board us in flight, but they probably can follow us."

"How much fuel do we have?" asked Yjul.

"About twenty-five thousand light-seconds."

"I'd like to see if they can follow us," said Yjul. "Turn on the atomic engine and set course for Alpha Hydrae. There is a radioactive planet in that group. The ore is poor, but it would enable us to get back home."

"Do you mean," asked Naomi faintly, "that we have not enough fuel of our own to get back to the populated area of the Second Metagalaxy."

"I'm sorry. We don't."

"Hell of a thing," Blomberg grumbled. "Should have sent an escort with us."

"An escort would have advised

the Alphirkians what we were doing, and it would have been only a matter of time until they would get hold of a ship with the absolute-motion engine in it."

"They've gotten us anyway."

"Haven't you had military training, admiral?" Yjul asked.

Blomberg took out a fresh cigar. "Sure, I know. Calculated risks. Somehow it doesn't seem as easy, now that we're looking an atomic attack in the face."

"You must be objective, general —not subjective."

Ekno was stabbing at buttons, pressing levers, turning wheels with all his fronds. Gongs clattered, buzzers sounded, lights flashed. Erle felt the *Drifter* lurch forward.

"Try a run through the Sink," Yjul suggested. "It might throw them off. We'll never outrun them straight on," he explained. "He undoubtedly has the best ship of the Forty-third Galaxy. But we have one thing in our favor."

"I'd like to hear about that," said Blomberg.

"He wants our ship whole and he wants Mr. Bertron alive."

"What does that mean in terms of survival?"

Yjul revolved a little toward the admiral. "As a man with military training," Yjul said softly, "you will realize that the only important objective is keeping the absolute motion engine and all its factors out of the hands of Volmik."

Erle watched the admiral struggle with himself, and Erle guessed that the admiral had a few odd genes in his makeup, but the admiral came out of it. "All right. Then we run."

"We run. We can't go far on the fuel we have. We can use about a third of twenty-five thousand light-seconds for acceleration. The other will have to be saved for deceleration."

"We could drift forever at our present speed, couldn't we?" Erle asked.

"We could. But it wouldn't do us much good. We'd probably get lost in the Void somewhere below Achernar."

The sibilant voice came again. "Stand by, *Drifter*. We are coming on board."

Ekno was pushing a lever to the left, and a black needle on a dial marked "c" was moving steadily to the right; it was approaching "700."

"Tracer rays on us," Ekno said presently.

Volmik's unpleasant voice filled the pilot room, and Erle looked back of him. Even Marissa was watching, her face unusually white. "There are no other ships in this area," Volmik said, "and your communications beam will not reach the listening post on Tarazed. You started with less than twenty-five thousand light-seconds of fuel."

Yjul's leaves seemed to bristle. "Spies everywhere," he said.

"There'll certainly be a cleanup if we get back," said the admiral.

Volmik spoke again. "This is the *Axplenator,* registered from Alphrik, Forty-third Galaxy. We accuse you of piracy against the carrier ship *Nucleonic* and order you to stand by for boarding."

Yjul's answer sounded like a snort.

"Volmik is putting that on the record for his own protection," said Fyllath.

"We ought to be putting something of our own on record," said the admiral.

Yjul motioned to a tiny flickering light. "Every sound has gone into an indestructible black box."

The admiral frowned. "*How* indestructible?"

Yjul's voice was softly grating, and Erle wondered if he was finding the admiral a little trying. "There are no degrees of indestructibility," Yjul said.

"But if the *Drifter* is exploded with a nucleonic warhead, like the carrier—"

"The box and its contents are concussion-proof and non-fusible. It would merely be thrown clear, with the impetus from the explosion added to its present speed. It would travel for millions of years, but eventually it would be caught up by the gravitational power of the Fourth Universe and turned inside the curvature of space. You see, it will be found *some*time."

"Provided," Ekno said, "that we don't get too far out of the universe before that happens."

Yjul seemed to shrug. "Then it would be found in some other universe."

"What good is it, if it can't be opened?" asked Erle.

"That's not what I said. It's indestructible, but it can be opened by bombardment with a combination of certain frequencies—the key to which is held at Intelligence on Tarazed."

"Then it seems to me it would be a dangerous thing for the Alphirkians to have in their possession."

"It would. There is no explanation for having such a box. But it isn't likely that our companions out there could find it, if that is worrying you. It's a small box, and space is rather large, out here. Also it will be traveling very fast."

"Wouldn't it be radioactive from the explosion?" the admiral asked sharply.

Yjul shook his leaves. "The material is completely inert. It will not pick up radiation. We use the same material for shielding our fuel. We couldn't use stygium at all without this. It's important to keep that in mind."

Erle looked at Naomi and wished he could say something to lessen her fears. Marissa was at a table at the other end of the cabin.

"We follow you," said Volmik. "There is no possibility of escape.

In the name of the metagalaxy I order you to stand by."

"Why don't you answer them so it can go on their record?" asked the admiral.

"A waste of words. They are controlling the record as it is made —or possibly it is already made."

"Those boxes are sealed by the Space Patrol, aren't they?"

"Of course. But undoubtedly they have extras. The Alphirkians are well organized for this type of work."

Ekno was still pushing the lever, and the needle had passed 800, but now he seemed to center his attention on a different dial—probably, Erle thought, the fuel reserve.

Naoim was watching the reptilian face, still in the screen. "Are they really snakes?" she asked suddenly.

Yjul turned from the screen. "Why do you ask that?"

"Its body doesn't seem real."

Yjul watched the screen.

"You are approaching the Void," Volmik said. "You are risking the loss of your ship and crew."

Yjul said slowly, "No, Miss Castiliano, they are not snakes. We do not know what they are. They appear in many disguises—often humanoid. But they are not snakes."

"Doesn't Intelligence know what they are?" asked the admiral.

"I don't think so. Perhaps only their servants, the androids they created, know that secret. Whatever they are, they have zealously guarded their form from the rest of the universe. Their motivation has been a subject of some speculation."

"I know!" Naomi announced. "They're ashamed of their own bodies."

Yjul uttered something that sounded like a chuckle. "Your intuition is extremely sharp, Miss Castiliano."

Ekno said without turning, "We can't make Alpha Hydrae. Our fuel supply has been tampered with."

Yjul whirled. "You said twenty-five thousand—"

"The gauges showed that much. But they were wrong too. Now look at them."

The needle was getting close to a red area.

"You can't depend on it, though. We don't know how much we do have."

"I have just made a radiation check. There are about four thousand available light-seconds left."

Yjul said slowly, "Why not head into the Sink? It's twenty light-years long, and it might be the *Axplenator* will not be able to keep a tracer on us in there?"

Ekno dropped the accceleration lever and touched one of a row of keys. Above the quartz window Erle saw the left half of a circle of blue lights go dead, and at the same time he felt a pull to that side. Ekno was turning the *Drifter*

with half a ring. A moment later Volmik's face on the screen became blurred and wavy, and Yjul nodded. "At least there's interference from that ionized magnesium, though there's probably not one atom per cubic mile."

"Why don't we turn back inside the cloud?" asked the admiral.

"In twenty light-years, at our speed!" Yjul shook his head. "We haven't the fuel."

The admiral's face reddened. He spun on his heel and went out.

Naomi turned to Yjul. "If we do lose them in the Sink, what do we do then?" she asked. "We haven't enough fuel to go back, and we haven't enough food to spend millions of years traveling the curvature of the universe."

"This may not be news to you, Miss Castiliano," Yjul said gravely, "but I have been wondering that myself."

Erle looked at Naomi. "And if we did have the food, where would we put the grandchildren?"

She stared belligerently at him. "What grandchildren?"

After what seemed like a minute or two, Yjul said, "We're out of the cloud, and coasting? Would you like to try the alignment again?"

"Yes," Erle said. He wished Naomi would stay near him, but she turned her back and went to join Marissa and the admiral.

He got into the chair and was strapped up with the machine. The lights went out. "No collision objects ahead, according to the atlas," Ekno reported.

"What's our course?" asked Yjul.

"Position minus thirty-three degrees declination, at four hours and fifty-five minutes right ascension, radial velocity positive at twenty-two light-seconds per second, trajectory minus forty-eight degrees, relativistic velocity one thousand, one hundred G's."

Erle began to concentrate. For a little while he thought he was going to get it, but at the very last minute the picture of Naomi walking away from him popped ino his mind and threw him off. Presently he tried again, but this time it was a memory of Marissa. Then he thought of Naomi again—her platinum hair and green eyes, her lovely legs, the way she had kissed him on the *Infinity*.

He awoke with Yjul unfastening the wrist contacts. "I'm sorry," Erle said. "I must have gone to sleep."

"Perhaps you can try later."

Erle went to the table. The admiral looked at him. "No luck, eh?"

Erle shook his head.

The admiral poured a drink. "No doubt our bones will be floating around down at the bottom of the universe for the next couple of millennia."

"There's hope," said Erle. "It looks as if we've thrown off the *Axplenator* anyway."

But a crackling came from the screen. Volmik's ugly head filled the glass. "How do you expect to get away?" he asked. "We can track you by your radiation."

They sank into silence then. Yjul, Fyllath, and Ekno remained at the controls, mostly standing quietly and staring into space.

The admiral lit a cigar; his hands were unsteady. He looked at Marissa with her head on her arms on the table, and rose with a great weariness resting upon him. It was visible in his tormented eyes, the slump of his shoulders.

"Must get her to bed," he said. Then he looked at Erle. "You carry her. I'll never make it."

Erle glanced at Naomi and saw the scorn in her eyes. But he rose slowly. If he got rid of these two, he told himself, he could be alone with Naomi and talk. He picked up Marissa and carried her quickly to her bedroom and laid her on the bed. The admiral had followed. Erle shut the door on them and returned to Naomi.

She was smoking a cigarette. She got up and tossed her cigarette into the disintichute.

"And we may not get away either," she said, referring to Volmik's threat, "unless you get your mind off *her* and remember what you came out here for—Mr. Man With Absolute Motion!"

Erle stared at her face. A double row of small spots shone like silver on her cheeks. They were tears, but what good did that do him? She walked out with her head high.

He poured himself a drink. With 400 billion inhabited planets in the metagalaxy, with 500 billion metagalaxies in the universe, and with 208 billion universes in the Cosmos, the probability of any two given persons coming together in the same ship was so remote as to be utterly inconceivable—and yet he was here, and so was Marissa.

XI

ERLE SLEPT FINALLY with his head on the table, but awoke to hear that sibilant voice from the screen. He got up, feeling beaten all over, and went forward.

"I am warning you. Stand by or we shall destroy you."

"We could surrender," said Yjul, "and probably be well treated."

"Surrender?" Erle stared at Yjul. "Never heard the word."

Ekno chuckled. He pushed the lever and the *Drifter* lurched forward. "We'll drive down into the Deeps," Yjul said. "They don't dare to follow us forever."

"The Stellar Survey hasn't charted the Deeps, has it?"

"No."

"Is there a possibility of finding fuel?"

"Speculative."

"If we don't, it'll be a long way home."

"Unless," Fyllath murmured, "we can get the engine aligned. If

we get that in velocital synchronization, we can outrun anything in the Fourth Universe."

"If we don't," Yjul pointed out, "none of us will live long enough to talk about it—for even *we* don't live forever."

They reached a velocity of 1900 G's before Ekno's gray-green tentacle released the lever. "We haven't lost the *Axplenator,*" he said, "but we're out in front."

"He isn't on the screen," said Erle.

"No, but I'm getting plenty of blips on the ultrawave. He's back there all right. He must have a powerful tracer."

"How's the fuel?"

"I've used just about all I dare. Providing we do get away, we'll have to allow for some directional bursts, and we'll have to cut down this terrific velocity."

"We can't outrun them, I'm afraid," said Yjul.

Ekno shook his head. "They're gaining on us now. They've got a good ship and plenty of fuel."

"If we used our fuel to reverse course, we'd have none left to accelerate," Fyllath noted. "Then it would be only a matter of time until they'd tie onto us. And we cannot afford to spend more fuel on acceleration, for at such terrific velocity as we are now traveling the only way to stop without ample fuel is to be taken in by a carrier ship."

Erle lit a cigarette. "You cheer me," he said.

"I've always wondered," Fyllath said softly, "what was on the other side of the Deeps. Is it really the Second Universe, where our race is supposed to have originated back in the mists of precosmic time, or might it be the Third Universe, where all natural laws are the opposite of those in the Fourth? Has the Second reached a state of entropy so that it's all run down—or is there just nothing at all down there?"

"As an academic question," said Yjul. "I like it—but I'm not eager to find the answer empirically."

"We have no choice," said Erle, "unless I can get back on the beam." He stepped forward and got in the chair.

Yjul and Fyllath fastened the wrist contacts, and Yjul worked the controls as the lights went out. Erle tried to concentrate. He tried very hard, but always, at the last moment, he would think of Naomi or Marissa, or both, and all power of sensing the primal motion would leave him.

Fyllath said softly, "It is the kind of thing where one must be calm and relaxed and sure of himself."

Erle looked at her. Then he got up and went to his bed.

When he awoke, Naomi was eating breakfast alone. "Mind if I sit down with you?" he asked.

"It's as much your ship as

mine," she retorted. "Anyway, I'm almost through." She looked toward the admiral's room. Somebody had closed the door, and there were sounds of activity.

"Listen," he said. "This has gone far enough." He stood before her. "What if we have to stay down here the rest of our lives?"

"Then you're going to have trouble with Marissa," Naomi said sweetly, "for she will be very restless!"

A few minutes later by apparent time, or a week later by relativistic time, a number of years by Earth-time, or minus 132 chronos by life-time, they were a thousand megaparsecs from Regulus City, in the unknown Deeps at the bottom of the Fourth Universe—a fantastic halfworld of black cosmic wastes where material bodies didn't average one in a million cubic parsecs. Erle was still trying to align the motion engine, and still failing, and they were still coasting.

"There's a blue star ahead," said Naomi. "Is that Achernar? Could it possibly be—"

Yjul was thumbing the *Astrogator*. "There's not much positive information on Achernar. Magnitude minus point six, although it doesn't say whether that is absolute. Spectral type eighty-five and that means a very hot star. Various unsubstantiated reports give Achernar a planetary system of over a hundred major bodies. High-level radioactivity has been supposedly detected. No Stellar Survey report available."

Yjul slapped the big book shut. "It isn't much."

Ekno said, "If we stay on course we'll be caught in Achernar's gravitational pull."

"We may as well," said Yjul. "We've got to get help some way or we'll never get home. There's no star system below Achernar."

"Is anybody even sure," asked Fyllath, "that Achernar is in the Fourth Universe?"

Yjul shivered, but he rested some of his fronds on the instrument board and slowly shook his top.

Erle said, "We'd better try again."

He tried but it didn't work. Naomi stayed on the opposite side of the control room, while Marissa and the admiral finished their breakfast.

Ekno threw the *Drifter* into a cometary orbit and reduced speed for a maximum of observation. Achernar was some twenty-four times the diameter of the Sun, and the ten nearest planets were gaseous or molten. But out about the twenty-fifth planet the worlds began to cool off, and there was some suggestion of green.

"Probable landing spots," said Ekno.

"No indication of radiating elements," said Yjul. "We'd better keep moving."

The ship had entered Acher-

nar's system at an orbital inclination of 32 degrees, and kept swinging around the star and back through the planets, while Yjul and Fyllath checked spectographs for oxygen, water, or carbon dioxide, and watched the counters for radioactivity.

On the eighth trip around, Yjul finished his gingerbread notes in the log book and said, "There's still one left—Achernar XCIV."

"We'll hit it the next trip," said Ekno.

They swung around in a tremendous elliptical curve. The Vaulet counter rippled with static and burst into a rattle. Then the planet was behind, and Ekno and Yjul were staring at each other.

"That's it!" said Ekno. "Terrific radiation. Heavy elements—maybe even stygium."

"Can we land?" asked Fyllath. "Is there solid matter?"

"Fairly high temperature," said Yjul, "but we can stand it. The Gruttman shields will protect us from radiation."

"We might be able to live there." Marissa said, gay again, "but what would we do for entertainment?"

"Solid matter," thought Erle. "Solid matter" could be molten stone, for instance. That was "solid," wasn't it? And what about the atmosphere? Would there be breathable air, or would it be, say, hydrogen cyanide, one breath of which would kill them, or perhaps pure fluorine, savagely corrosive?

Erle kept still, but he realized, and he knew the Gamma Velorum people understood, that the only chance was to find a radiactive mineral, get it on board quickly, and move on. It was entirely possible that the only breathable oxygen would be the supply which they carried themselves.

The nose gauge began to show considerable temperature. "I'm letting it heat," Ekno explained, "to save fuel. There's a heavy atmosphere, and it will help to slow us down."

The sonar gauge showed 18,000 meters above the surface of the planet. They swung twice around, steadily decelerating.

Below the clouds, Erle pointed to a great spout of black ash and red hot rock. "Lots of volcanic activity," he said.

"To be expected from a planet with radioactive content. There'll be constant earthquakes and terrific storms. We may not even be able to get out of the ship."

"I'm getting chlorophyl lines," said Fyllath.

"Then there's oxygen. That sounds friendly."

"I'd like to park next to some nice, quiet volcano that isn't mad at anybody," Naomi said hopefully.

They put on space suits which looked like long underwear made of gray silk, with mechanical three-fingered hands. "The aerial on top is to receive power broadcast from the ship to operate all the various

functions of your suits," explained Yjul. "Watch out when the red light glows. That mean's you're getting too far away, or the power supply from the ship is getting low."

"What furnishes power from the ship?" Erle asked abruptly.

"The fuel that is left."

Erle didn't have to ask more. He knew just how little fuel remained.

"There's a small emergency powerpak that will carry you for a while."

Naomi shuddered. She laughed a little hysterically. "What if the powerpak goes? Do we walk into the first cigar store and ask for a refill?"

Yjul looked at her, alarmed by her pallor. "There are many things that can be done," he said, reassuringly. "One must never give up."

Erle nodded.

A moment later the *Drifter,* with one last burst of power from the under rings, settled into a grove of giant ferns.

The seismograph showed continuous volcanic activity, but Yjul unsealed the outer door of the airlock. "The gravity will be heavy, I think, but the Healey units will make it possible for us to move."

Naomi made a grimace.

"I must warn you that we are under water—but don't be frightened."

"I'm not frightened," said Naomi. "I'm scared to death." But she refused to look at Erle.

The water flowed into the airlock and rose around them. It was warm and brown-looking. Yjul went out first, and presently they heard his voice in their ear phones, "There's a little drop about the height of a man. Set your Healeys at six point one."

They stepped off into the water. Where they were, twenty feet below the surface, there was a ghostly half-light from the great ferns. There was also an occasional thump that shook the muddy ground, and rumbles that made the surface of the water shimmer as they played their lights up at it.

A great gout of red fire leaped out of the earth far ahead of them and lit up this strange world. For a moment the crater looked like the nozzle of a giant blowtorch. Cubic miles of ash were belched up to blot out the fire. Tremendous clouds of sooty black smoke poured up as the fire died away. They were in sudden darkness, only a little relieved presently by the faint luminance of a sun twelve billion miles distant.

They moved carefully, feeling their way among the trunks of the giant ferns, sometimes walking on solidified lava, sometimes knee-deep in slime. A tremendous clap of thunder struck the water with a crash. For a moment Erle was dizzy. He looked for Naomi, but she was standing calmly, watching the surface above.

"According to the time lapse, the volcano is twenty-nine kilometers away," said Yjul. "We'll divide into two parties and work toward the volcano. Say about twenty chronos going out and twenty coming back. Watch your counters for indications of radio-active ore."

Their helmets broke water and they came out on solid rock.

"It was comfortable down there," said Naomi. "I expected it to be hot."

Yjul looked at her curiously. "Do you know the temperature of that water?"

"No, I—"

"One hundred and two degrees Centigrade."

"That's over boiling," said Erle.

"Not on this planet."

"You mean," asked Naomi, "that we walked through boiling water over our heads?"

"Your suits refrigerate," Yjul told her. "Now you and Mr. Bertron slant off to the left. We'll go to the right. Watch your Mueller counters. They are set on the number thirty, and anything that comes through will be hard radiation."

They didn't find it that day or the next. Or the third. They sat around that night; Marissa and the admiral had not left the ship and were somewhat drunk. There were only three bottles of Scotch left.

"How much more power do we have left?" Naomi asked.

"Not too much," Yjul admitted. "If we don't find something tomorrow it will look pretty hopeless, for it would take power and time to mine the stuff and load it in the ship after we find it."

They christened the planet that night. With three fourths of their allotted time gone, and only one day left for exploration, they held a small celebration.

"I propose a toast," said Erle, "to the new planet."

"It should have a name," Fyllath agreed.

"Why not call it Orphan?" asked Naomi. "It's surely a long way from its parent."

XII

ERLE OMITTED shaving the next morning to save power. "An erg is an erg," he told Yjul. He was feeling pretty good, for Naomi seemed more friendly.

"You are right," Yjul said. "The energy required to run that apparatus might make the difference between life or death."

It was on that day they discovered that The Orphan had three moons, for they all came up together. Each was different size and they moved at different speeds, being hardly more than light gray disks against a darker sky. A few hours after they saw the moons they decided there were no mobile forms of life anywhere on the planet. There were algae, but no fish, no eels, no amphibians.

"Apparently The Orphan is not

ready for animal life yet," said Yjul.

That night they were glum. "We've found nothing that could be called a deposit," Yjul reminded them.

"Tomorrow," said Ekno, "we'd better keep the ship closed up. We can live for fifty or sixty days if we conserve energy."

"That won't do us any good," Erle contended. "What chance is there of another ship's crossing the Deeps in the next sixty days? And if it did, what makes you think it could find us on a world of this size? And we must eat. We're no century plants."

Yjul shook his head sadly. "We could not live much longer than you. When our power supply is gone, the ship will no longer be refrigerated. How long do you think we can endure temperatures above that of boiling water?"

"Not only that," said Fyllath. "The Orphan is having a period of comparative quiet right now. The temperature could easily go up a hundred degrees outside if volcanic activity increases in this area."

Erle looked at them. "Sorry," he said.

Already it seemed unusually warm inside the ship. The humidity gauge said 50, and Erle had to keep wiping the dampness from his forehead. The last bottle of Scotch stood nine-tenths empty on the table between Marissa and the admiral.

Erle said, "Once there was a tridi called *Orphans of the Storm*. They could do one on us called *Orphans of The Orphan*. It would be ironic, at the very least."

Nobody laughed. Naomi looked pale and strained. She was starting to say something when Marissa got up. She reached Erle with the bottle of Scotch in one hand. "There's enough in here for one more drink," she said. "I propose a toast to the Man with Absolute Motion —and he should drink it." She thrust the bottle at him.

Erle pushed it away.

Naomi was staring at the thermometer in the center of the control room. "Rather than sit here and wait," Erle said, "I say let's keep looking for ore. You've forgotten one thing, Yjul."

The tall Gamma Velorumite seemed to be pressing what must have been his head with one leaf. He looked around. "What's that?"

"There's still enough power for four days' exploration. We might as well use it, because if we find ore, one of us can bring back enough in our hands to keep the power plant going while we dig more."

Ekno nodded. "And there's still the possibility that you might be able to align the sail to make it functional again."

Erle looked at Marissa, and then at Naomi, who had her back turned. It was a fantastic situation. With so much dependent on the

alignment of the sailpack, these two women were exerting too much effect on his efforts.

THEY DID not find fuel the next day or the next. On the third day, as they were resting at the far end of their route, Yjul said, "The volcanic activity is increasing. We might expect almost anything—submersion in red hot lava, a fissure opening up under us. Almost anything. So it is as well we have used our power this way."

Erle said, "Have we covered all the possible ground?"

"All but one segment. I was saving that for tomorrow."

Somehow Erle found Naomi's hand in his, and he took a deep breath. They rested for a little longer, saying nothing, watching the crater belch fire and smoke ahead of them. Stealing glances at Naomi's face as it reflected the red light of the volcano, Erle thought that, strangely enough, he had never been quite as happy as he was at that moment. He had suffered a great deal from her aloofness, and now, he hoped, there would be no more of that.

They reached the ship and all went in together. "One more day's power left," Yjul said as they got out of their suits. "Maybe you'd better try the sail again, Mr. Bertron—before it's too late. It will take power to amplify your thought-force, you know."

Erle looked at Naomi. She smiled at him, and he felt wonderful. Yes, he could do it now; he knew he could. "Strap me in," he said.

Yjul fastened the connections on his wrists. The lights went low and Erle began to concentrate. *This time,* he thought, *this time was it.* Naomi was standing at his side. Yes, this time he would put it over.

Suddenly Marissa, too, was at his side, her hand on his shoulder. "Do you really think you can do it?" she asked, and her voice, smooth as it may have been, grated on him.

"Why don't you let me alone?" he asked harshly.

Marissa looked up at him, then went away slowly. Naomi walked to the airlock and stared at the volcano.

Erle sat there for a few minutes. Then he took the wrist connecters off and slammed them down. "I can't do it tonight. It would be a waste of power to try."

He got up and went to bed.

In the morning they adjusted their suits and left in silence. Yjul had checked the fuel. They had one more day—no more.

They had almost reached the end of their journey when a call came from Yjul and Fyllath. "We've got something here! It looks good! If you can cut across a couple of kilometers, we'll take back all we can carry."

They had two radiation hammers and four collapsible Healey

units, and it didn't take long to fill them. The red lights began to glow as they waded into the swamp, but they made it through the airlock. Ekno helped them load the jagged pieces of ore in the bin. When they had finished, Yjul was sitting down. It was the first time Erle had ever seen him assume such a position.

"Headache?" Erle asked.

"Splitting," said Yjul.

"Well, hang together. We'll be off of this planet soon."

"Now that the immediate problem appears near a solution, I can't help thinking about the only really important problem. Our small, individual lives are nothing compared to the future of the metagalaxy."

The next day they brought in two large loads of ore with the aid of the Healeys. Ekno went with them and surveyed the deposit. "There's plenty here. All we have to do is get it in the ship."

His leaves fluttered as the ground thundered under them, and he looked up at the volcano. "Before that thing blows up the planet," he added.

In three more days they had a sizable supply in the bins. Three days after that they had enough to take the *Drifter* back to the populated portions of the universe.

They loaded their carryalls for the last time, never taking their eyes off the volcano. Rolling clouds of fire and smoke were being blown into the sky with steady, tremendous violence. The swamp was beginning to bubble and steam.

Erle fell back to help Naomi lift a foot from the sucking mud. He heard Ekno say sharply in Regulian: *"Angón ambeta sto?"*

Erle straightened. That was the metagalactic challenge.

"There was something moving in the water ahead of us," Ekno said. "The mud is still swirling."

They cut off their lights and made their way cautiously through the water, winding in and out among the softly glistening trunks of the ferns. Then the red light began to glow in the top of Erle's fishbowl. Around him, the other three showed red lights too.

"Somebody has taken control of the ship!" shouted Yjul. "They are cutting off the power."

"Surely not Marissa and the admiral."

Erle shook his head. "They don't know enough. Switch on your emergency packs."

"We must assume," said Ekno, "that somehow the Alphirkians have reached our ship and have gotten control of it. But there is one factor in our favor. They want Mr. Bertron too."

"Then we can make at trade," Erle said. "I go on board only if they let the rest of you on the ship."

The ground was rumbling under them until it was hard to stand. Back through the water, Erle could

see that a great fissure had opened in the side of the crater, and molten rock was boiling out of it.

Ekno made a reconnaissance of the ship. "There is a third person in the engine room," he said. "My guess is they are trying to figure out how to convert the broadcast power plant over to impulsion."

"Let's go in," said Yjul.

Ekno looked back at the crater and watched a cubic mile of rock and ash hurtle into the air. "I'm afraid we aren't accomplishing anything out here. Volmik—if that *is* Volmik—has cut off the broadcast, and it is only a matter of time until he gets the power switched over to the atomic unit."

"With an uninhibited volcano behind us," Naomi said, "it doesn't seem that we have any choice."

They helped Yjul up, and he opened the outer door of the airlock and looked through the inner glass. One of his leaves stabbed a button in the wall, and Yjul said with a sigh, "Come on up. He's in the engine room, and I have closed the bulkhead against him. He can never get out now."

They climbed up and stood in the airlock while the compressed nitrogen blew the water out. Then Yjul opened the inner door. They went inside. A burst of fire from the crater lighted up The Orphan and threw weird red shadows over the control room. Marissa and the admiral were sitting there. Then the ship was shaken from the concussion of the last explosion and scorched by the blast of heat. The strange smell of bromine lingered in the control room.

Erle ran to the bulkhead. Inside, Volmik's huge reptilian body lay on the floor among the bins and the engine, and his six hands were busy on the controls. Ekno and Yjul had run to the control panel of the ship, and Erle turned back in time to see Fyllath falling back before a strange man with dead white face and a red fringe of hair.

It was Jastrow. Naomi started for him, but Erle got there first. He hit him on the chin twice, but Jastrow didn't even grunt. He got hold of the man's throat and began to strangle him. He felt him go limp, and then a strange thing happened. Jastrow began to dissolve. His neck went to nothingness under Erle's fingers. He became a cloud of smoke that rolled in upon itself, becoming swiftly smaller and smaller.

Jastrow's red fringe of hair looked out from the ball of smoke, and his black eyes gleamed with malevolence. Then the ball rolled across the floor and through the bulkhead. Erle ran to look through. The smoke was sucked into the nostrils of the snake and disappeared. Erle felt sick.

The ship was rocking violently. Water splashed on its sides, and the frame shuddered. "Don't you think," said Fyllath, "we'd better get under way?"

"Sorry," Ekno said. "Somehow he's preventing us from getting power. Probably he hasn't figured out the combination yet."

Naomi looked at the bulkhead and shivered. "What happened to Jastrow?"

"I think," said Yjul, "Jastro was Volmik's other self. He could form into anything Volmik wanted, but he did not dare to be out of the Alphirkian's body when he died, or he'd have to roam space forever in that form—and I have no doubt the humanoid form is repulsive to them."

The ship was rocking as blast after blast lighted up. The Orphan with red fire, while concussion after concussion shook the *Drifter*. The wind was coming up and hurling steady sheets of brown water at the ship's sides.

Erle said, "Give me a weapon—anything, a chair leg, an empty liquor bottle. Hurry! Somebody has got to go in there and get rid of that thing."

"You couldn't do it," said Yjul. "Volmik has powers beyond any of us. You wouldn't get through the bulkhead—and then we'd all be at his mercy!"

Erle was at the bulkhead now, looking through the round plastic window. His face had gone deathly pale.

"That's one of their androids!" Yjul exclaimed. "They've been threatening to revolt for ten thousand years!"

A humanoid form was standing amidst the bins and engines. The humanoid had an air shovel in its hands, and was stabbing at the snake. Volmik kept weaving from side to side, trying to fix his terrible slitted eyes on the android's eyes, and Volmik's puny yellowish hands kept reaching for the android's sides.

"Why doesn't he coil around the android and crush him?" asked Naomi.

"I doubt that he has any real constrictive power in that artificial body," said Yjul. "The Alphirkians seem always to have controlled their androids by voice and mind."

"He isn't doing it now," Erle noted.

"No. It is not the first time an artificially created being has assumed volition," Yjul observed. "You put certain units together—it doesn't make any difference whether they are flesh and blood or electrical—and you induce certain impulses through them for countless thousands of years, to the effect that the total unit or being moves by itself and performs actions initiated only by the impulses. It is not astonishing that eventually the impulse-paths, becoming well worn, induce the impulses of their own accord.

"Eventually some of these impulses will take independent paths, and you then have a creature with initiative. I think that's what has happened here. The Alphirkians

were warned of this by metagalactic officials a long time ago, but for some reason they refused to have any living being on their planet except themselves. We have never understood that. Perhaps we never shall."

The ship rocked violently. Volmik was now grasping the android's wrists with four of its hands, while the other two were pawing the android in what would have been the kidney region of a human. The android tried to get the air shovel aimed at the snake's neck, just back of its head. But the puny arms showed surprising strength, and the android seemed unable to overcome them. Also it seemed mortally afraid of the damage that might be done to it by the lowest pair of hands, and kept twisting away.

A constant flickering red fire from the volcano lighted up the interior of the control room.

"The temperature is rising," Ekno said, his voice shrill with alarm. "Molten lava is pouring into the water."

"There's nothing we can do," Yjul said, "until something happens in the engine room."

"Why not blow them out of there with a blast of compressed nitrogen?"

Yjul turned a little. "Why not?"

Erle said, "I hate to see the android kicked out when he's putting up such a battle."

Yjul asked curiously, "Would you rather risk being destroyed by the volcano?"

Erle said, "No matter what it is, when it's fighting for its life. It ought to have a chance."

Yjul said, "Some of the characteristics you exhibit are remarkably un-human."

Erle shrugged. "Not necessarily," he said. "In earlier days my characteristics were widespread. The trouble is, I'm normal."

"Normal would mean that self-preservation comes first." Fyllath looked at Erle curiously. "That's the most normal characteristic in the metagalaxy."

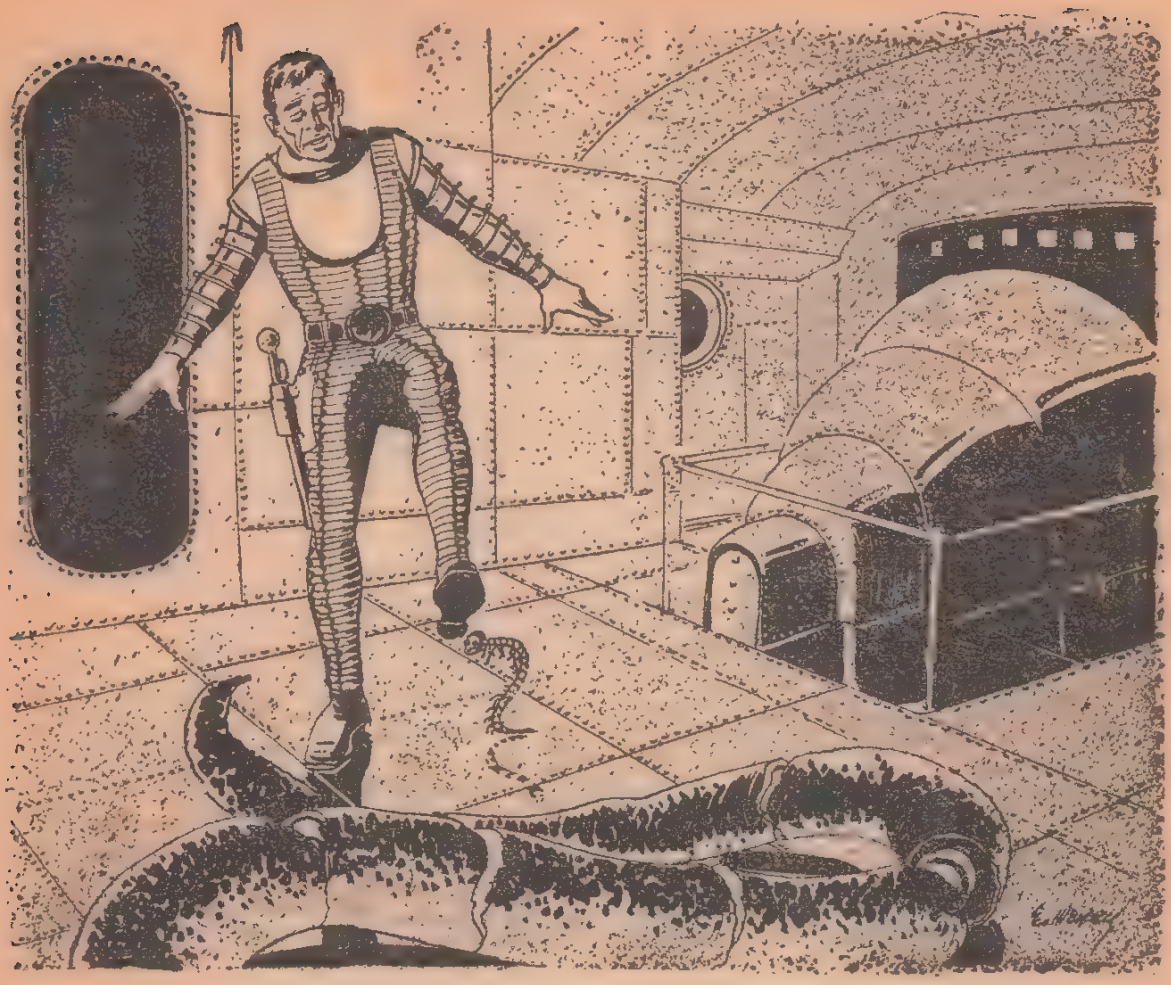
Erle didn't look at them. He was watching the fight in the engine room. "Let's call it a 'cultured' normal. My normality doesn't go back past the historic period."

"Call it anything," Ekno said. "The ship is settling. If it gets deep into the mud, our tubes will be fouled and we'll never get out of here."

Erle took a deep breath. "All right. Blow them out." He noted with satisfaction that Naomi was clinging to his arm. He looked at her, and could see that their minds were as one.

"I only hope," said Naomi fervently, "that he cuts the snake's head off."

At that moment the android planted the sharp edge of the air shovel behind the snake's arms and pulled the trip-trigger. The shovel went through the snake's



body, leaving it attached by only a shred of skin.

"It's artificial!" Fyllath pointed out. "That's flexible metal, and there are wires running down from the head."

The snake's body was curled around a stanchion, but now, as the head was severed, the body went limp. One of the lowest hands, still pawing the android, seemed to find a soft place in the android's body. It sank in, remained embedded for a moment, and then the android suddenly lost all motion and stood as if quick-frozen. The little yellow hand came out with a bundle of wires.

At that moment Erle hated the Alphirkian with an intensity he never had felt toward anyone.

The first blast of nitrogen swept through the engine room, and the android, still rigid in the attitude he had had when he was disconnected, was blown over and swept away through the hatch. The blast tore at the snake's body, now no longer tight around the stanchion, but lying limp and helpless. The

snake's head stared at them through the circular glass. The vivid intensity of its slitted black eyes was fading. With one last effort the head twisted itself back. Its great mouth opened, and it buried its teeth in the stanchion.

The nitrogen tore at the metallic body. The "skin" connecting it to the head was ripped, and the body skidded across the floor and through the open hatch, propelled by the pressure of the gas into the murky brown water.

Yjul took his finger from the button. "All but the head. Shall we—"

"No!" said Ekno. "The head may contain the thing!"

"Not likely," Fyllath pointed out. "Its eyes are glazed over."

"It could be a trick," said Erle.

"Trick or not," Yjul said firmly, "we have got to get in there and connect the engine."

He began to unbolt the door. The surface of The Orphan now was shuddering with long and violent spasms. The ship was settling deeper with every move. Erle helped, and they swung open the bulkhead.

Naomi, staring at the "dead" head of the snake, threw her hand to her mouth. She flung herself at Erle and put her head against his chest, her arms clinging to him convulsively. "Worms!" she said. "The thing is already turning into worms!"

Erle stared. One small white worm was emerging from the head. Yjul darted into the engine room and began to throw levers and breaker switches. The ship was tossed from side to side and up out of the mud. Then it began to settle again. The white worm-like thing was crawling down the stanchion. It reached the floor and started for the open bulkhead. They stood back, fascinated.

Then Yjul called in a despairing voice, "The nitrogen blew the fuel away! We haven't enough left to get out of the water!"

But for a moment they watched the worm. Something about it held them spellbound. Erle felt a hypnotic trance coming over him, but he couldn't do anything about it. They all stood back a step as the worm progressed into the center of the room. Yjul came up, and stood motionless, his fronds rigid.

The worm reached the center of the control room and turned. Its tiny head reared high, and Erle began to hear words in his mind: "You will all obey me. I am Volmik II, ruler of Alphirk and the Forty-third Galaxy. You, Yjul, gather what fuel is left and feed it into the engine. You, Ekno, go to the controls. The rest of you will go to your respective places and make no attempt to interfere. Any hesitation on your part will subject you to instant punishment by ultrasonic vibrations."

They stood as if dazed. Then Yjul went back to the engine room.

Ekno moved to the controls. Fyllath went forward to her position. Erle and Naomi moved sidewise and finally started to sit down at the table with Marissa and the admiral.

The admiral's head was raised. His bleary eyes looked at the worm. "Alphirkian, eh? Volmik II, eh?" He got unsteadily to his feet. "This is one time I can do a good deed for my metagalaxy. Frankly, I welcome the opportunity."

He stagged toward the worm. Erle felt the tremendous force of the Alphirkian's mental powers lifting as it directed all of its dynamic energy at the admiral.

But the admiral's brain was too fogged by liquor to be subject to it, or perhaps the liquor had removed his inhibitions and he could be his normal self. He continued to walk straight toward the worm, which reared its head still higher.

The little, round-faced man lifted one foot above the worm, and then all the vibrant force of the worm's sonic radiation must have hit him. Erle saw the admiral die on one foot, his other in midair. His eyes went glazed and his muscles went slack, but the upraised foot descended. There was a sharp smack, and the inner juices of the worm squirted out from under the admiral's foot. The admiral fell over on the floor.

"A worm!" Naomi cried. "No wonder they didn't want anybody to know what they looked like!"

XIII

YJUL RUSHED FROM the engine room shaking his head. "We'll never make it. There just isn't enough fuel."

Erle looked at Naomi and touched her arm. She looked back at him, and suddenly dropped her forehead in his hand. Erle felt the power of a great purpose within him. He jumped up and went to the chair at the instrument board. "Strap me in!" he said to Yjul.

Yjul began to work. "How much time?" he asked Ekno.

"We seem to have hung up temporarily — probably cushioned by the ferns," Ekno said. "But we can't hang here very long."

He looked toward the volcano. The entire visible area of The Orphan now was almost afire. Steam bubbled steadily up through the water around them, and even the trunks of the ferns were becoming black and shriveled under the heat.

Yjul turned down the lights. "Try to concentrate," he urged.

Erle began to slip into the familiar pattern. He closed his eyes, and the black currents started to flow around him.

Marissa's voice was in his ear: "Good ole Erle. You'll get us out of here, won't you, Erle darling?"

Her arms were around his neck from behind. His hands, fastened in the connectors, could not be raised, and he could only shrug and look toward Naomi for understand-

ing. She had jumped to her feet. For a moment she seemed about to attack Marissa. Then, her sea-green eyes blazing, her lips compressed, she turned away and went to the airlock door. She stood there and stared toward the volcano.

Erle said, "Go away, Marissa. Go away. I'll get us out of here—but go away!"

Fyllath led Marissa back to the table, and Erle tried to settle back and concentrate again. But Naomi was still staring out through the airlock, and though he tried to will her to turn around, she did not.

He turned back to his task and tried to concentrate. A new series of concussions hit the ship and tossed it one way and then the other.

"We went to forty-three degrees inclination that time," said Ekno. "I doubt that we can maintain our equilibrium much longer."

The deck was pitching and yawing, and the ship was heaving violently as if in consecutive troughs of a great sea. Erle, strapped in his chair, was fixed, but he looked for Naomi. She was on the floor, skidding to the opposite side of the control room. Yjul was after her and helped her to her feet.

Erle tried to catch her eyes, but she refused to look at him. He wondered about Marissa, and saw that she had fallen to the floor and become wedged among the legs of the table, where she now lay limp, her head rolling from side to side as the floor went up on one side and then slid down, up on the other and again down.

Once more Erle tried to concentrate on his task, but Marissa's scornful sea-green eyes were everywhere in his mind.

A rain of molten rock and heavy debris began to fall on the ship. The lava hissed into the water and streamed down the sides of the ship.

Ekno looked at Erle. "At least we'll be decently buried," he said.

Erle knew it was no use. He had done what he could, but it wasn't enough. They'd be cooked in a solid matrix of lava, but the agony, at least, would be over in a matter of seconds.

BY THIS TIME the Bryd had become restless. What had been a very cozy, warm, pleasant mind for a quiet sleep had now turned into something of a madhouse, and the Bryd had been having nightmares. Restful minds had been hard enough to find the last few thousand years, and the Bryd had felt very proud of itself for finding Erle Bertron's mind. But now it looked as though it would be forced to move again.

It began to probe around in Erle's mind, and before long it was quite astonished at some of the things it found there. It saw the belching volcano, the quaking ground, the steaming water, and the rain of red hot lava, and flinched.

The Bryd looked around the control room. It detected the three from Gamma Velorum, and after a brief excursion into their minds wondered what had gotten into them to tie up with a crackpot like this Bertron fellow.

It saw Marissa's body twisting among the legs of the table as the ship tossed about, and made a quick examination. Marissa, whoever she was, had died of an epileptic seizure—had choked to death on her tongue. She wasn't human anyway. She was a special android made by the Alphirkians and endowed with all human characteristics, even neuroticism, to serve as a spy for Volmik. Her system was saturated with alcohol, and the Bryd came out reeling.

The Bryd found the admiral's body, and it took about one tenth of a millichron to figure that one out. The admiral had died too. The Bryd looked around and found the remains of the Alphirkian on the floor.

A quiver passed over it.

The Bryd went back to Erle's mind, and then, really beginning to awaken, it discovered Erle's apparent despair. It saw that Erle's distress had something to do with a female named Naomi.

The Bryd thought things over for an instant. If Erle wanted Naomi, why wasn't he getting her? Well, obviously even to the Bryd, that failure could be directly related to some opposition from Naomi. The Bryd took a quick hop-skip to Naomi's mind and was astounded at what it found there. The woman was eating her heart out for this Erle fellow.

Somewhat puzzled, the Bryd went back to Erle's mind. Yes, the fellow wanted her. Marissa really played no part in what he wanted, even though he didn't know she was dead. The weather, it decided, was somewhat violent even for a primitive planet like The Orphan. It was getting ready to blow itself apart.

It wasn't cozy in Bertron mind any more, and it wasn't comfy. It might as well have picked a neurotic mind. The Bryd sighed. Naomi was jealous of Marissa. Humans hadn't changed very much in fifty thousand years.

Well, what to do? The Bryd decided to implant the knowledge of Marissa's death in Naomi's mind, and sat back to await results. Naomi continued to lie face down on her bed, shedding tears. It went a little deeper into Naomi's mind and implanted firmly the knowledge that Erle loved her.

Suddenly Naomi turned over, got to her feet, steadied herself against the heaving floor, and rushed outside. She dashed across the floor and fell into Erle's arms, sobbing. Erle's wrists were still fastened and he couldn't put his arms around her. But that didn't seem to make any difference. She didn't say a word, nor did Erle.

The Bryd was well satisfied with the rosy warmth that flooded over Erle's mind, but it took a quick look over its shoulder and saw the ground arising outside in the beginning of a mighty blowoff. In about two seconds, it saw, there would be a chasm under the ship that would reach clear to the center of The Orphan.

The Bryd burrowed a little deeper into Erle's mind. With Naomi still hanging on him, the Bryd did a brief job on the lobe of Erle's brain that had to do with his sense of absolute motion. It made sure that Erle, filled with this blessed radiant warmth generated by his contact with Naomi, started concentrating on the black currents. The Bryd could have told them a lot easier way of detecting absolute motion, but that wasn't within its policy.

Erle went to work. He put the volcano and the earthquakes and the boiling swamp and the hurricane out of his mind, and kept only one thing—absolute motion. The currents of blackness flowed past him, and then suddenly he was caught up by them and carried with them, and there was no time, no movement, no energy, no existence —nothing but the feeling of rest.

At the same time, lights began to flash on the instrument board. Yjul, in spite of his headache, began to throw levers. A mighty rumble of power shook the *Drifter* from stem to stern. She shivered and bucked against the sucking power of the mud, and Yjul threw still more quadrillions of ergs into the battle. Just to be sure they'd make it in time, the Bryd skipped into Yjul's mind and prodded him a little.

The ship reared and rocked. With jets spurting purple green flame for ten thousand miles, she roared up out of the swamp and surged into the sky above The Orphan at 1200 absolute metagalactic G's.

The Bryd took a deep breath. That had been close. It rolled into the warmest corner of Erle Bertron's mind and began to settle down. It was almost asleep when it remembered something. Having gone this far, it might as well go the whole way. Yawning and figuratively rubbing its eyes, it went out and looked around. The Scotch was all gone and all the bottles but one had gone down the disintichute.

The Bryd went back in time about one twenty-five-millionth of a millichron. It picked up the empty bottle so fast that even Fyllath couldn't have seen it. It set it up on the table, which now was steady, thank goodness, and filled it with Scotch whiskey.

It crawled back into Erle's mind and before it went to sleep it implanted the knowledge of the full bottle of scotch, and the last thing it remembered was Erle, his wrists unfastened, getting up from the

chair and saying, "Let's have a drink to celebrate, dear," and Yjul, his headache gone, looking bright and refreshed, with Fyllath close at his side, and Ekno standing at the controls, happy because he was once more moving through space . . .

XIV

ON THE WAY home Ekno experimented with the new power and got the *Drifter* up to nearly 3200 metagalactic G's.

"That's not the limit," he said. "We have to stop and report to the general. The metagalaxy needs this new energy."

"Do you have any idea," Erle asked, "how fast it would go?"

"I wouldn't be surprised," Ekno told him, "if we could attain G's into the millions."

"The only trouble," Yjul pointed out, "is that you've got to have a lot of room to make a run like that—for it takes as long to slow down as it does to gather speed. If we were making the run to the Ninth Metagalaxy, with a million light years to work in, we'd probably find that we have suddenly multiplied the available energy in the Fourth Universe by infinity."

They passed the Sink and sent a neutrogram to the metagalactic listening post on Tarazed, advising Remiggon of the fate of Volmik and the success of the cosmodrive. Decelerating at an enormous rate, and using the waste power to feed back into the artificial gravity units in bow and stern which protected them from the lethal pressures set up by deceleration, they were met below Regulus by a carrier ship. It took them to Airlock 58, from which they had left a few days before—though it seemed like a lifetime.

Erle and Naomi and the three Century Plants went down the ramp and got on the brown lane to Remiggon's headquarters. The carrier ship was swarming with purple balls.

"Security precautions," said Yjul. "That ship with its engine is worth a fabulous sum. Agents from every metagalaxy in the universe will be looking for a way to get their hands on it. Remiggon is right in taking no chances."

A new secretary was in the general's office—a humanoid girl, a striking brunette with dark eyes and high cheekbones. Erle started to smile at her, but looked at Naomi and saw the storm gathering in her sea-green eyes, and changed his mind. The girl said, "His Excellency said you were to be admitted at once."

The general was waiting on his desk, under the black ceiling that showed the Milky Way, and when the door opened for them, the purple ball floated forward to meet them. For the first time the general displayed a little of the friendly exuberance Erle had always ex-

pected of him. But he sobered quickly, enough when Erle said, "The admiral and his wife were—one directly, the other indirectly—victims of Volmik, just before he died. We buried them in space."

There was a moment of hushed silence. Then, very quietly, the general began speaking, his voice tremulous with emotion. "He will be missed," he said, "by all of us. He was a man of great courage, with exceptional gifts of mind and heart. But we can rest assured that if he could have foreseen how soon he was to die—he would have made no other choice. This new source of energy is going to be a tremendous boon to the metagalaxy. There are many planets without moons, too far from their suns to receive heat, too old for tides, with no interior heat, no available fuel, no falling water, no radioactive cores. To them this energy will be an incalculable boon."

"One would think," said Erle, "that such a planet would not hold much attraction for sentient beings."

"Our planet," said Yjul, "has little to offer but desert, and yet we like it. We have learned to go out into the desert to stand for weeks at a time and gather strength."

"That is one of the astonishing things about the metagalaxy. No matter what the conditions, a species doesn't like to leave it. We have a planet belonging to one of the double stars of Izar. Periodically it gets drawn between the two stars, and the temperature extremes would seem to make life impossible. There are no surroundings of interest, for the planet is nothing but flat sand.

"There is no water, no atmosphere, no wind, no change of any kind from century to century except the temperature—and yet a sentient race—a humanoid race—has evolved there, and likes the planet. The inhabitants are extremely vigorous, with unusual survival characteristics, as you can imagine. They may some day be valuable citizens of the metagalaxy."

"And by the way, you will be interested to know when the news of Volmik's death reached Alphirk, it precipitated a general uprising. All natural Alphirkians were hunted down and killed, and the androids now are operating the planet."

Naomi shuddered. "Worms? Why did they have to be so malicious?"

"It's hard to say. There is no reason why even a worm should not be an upright citizen, but I suppose their evolution let only the antisocial worms survive. However, they prepared their own doom, you might say, by building the androids."

The general finally rested on his desk. "There is now the problem of aligning more engines for

us, Mr. Bertron. Do you think you are up to it? It will not be an easy task."

Erle nodded. "Undoubtedly it will be monotonous work, after what we've been through—but you own my contract."

"It's gratifying to have you agreeable. I think all of you should stay around the city until we are sure the conversion program is on its way."

"Whatever you say," said Yjul.

"You are feeling better, I hope."

Yjul's leaf-tips danced. "Never better in my life. When I felt the power surge through that engine, I knew my troubles were over."

"The ladies, of course, will remain?"

"There is one formality," Erle said. "Naomi and I want to be married."

"Oh? Are you prepared to take an oath of loyalty and fidelity to Miss Castiliano?"

"I am."

"And you, Miss Castiliano?"

No sound came from Naomi. Erle turned to look at her. She was staring at him, her sea-green eyes inexpressibly soft. "You didn't tell me," she murmured.

Erle touched her arm. "His Excellency is waiting for an answer," he said.

She looked down at her brown legs, splendid in the chartreuse shorts. "I'm not dressed—and—you didn't warn me!"

"The question," Remiggon said, "is whether you do or do not want to marry this man."

She took her arm from around Erle's neck. "Your Excellency, I most certainly do."

"Then I pronounce you man and wife. Now about our plans for the coming—" He sighed and muttered to Yjul, "I doubt that either one of them is interested in plans on a metagalactic level."

ERLE WENT OUT in ships. He aligned engines as long as he could get the feeling of motion. The laboratory had already worked on a way of pairing an aligned engine with an unaligned one, so that in effect each engine could double itself indefinitely, but they were not having much success.

Erle didn't mind anyway. Their apartment was of glass bricks and silver trim, with the weather whatever they wanted to dial, doors that opened automatically and never forgot to close themselves, artificial moon and stars and even sunlight calibrated to Earth perspective, lights that turned on when one needed them, a stove that did its own shopping and marketing and baked perfect food of any description they might choose.

Or they could stroll through Regulus City in the evening, riding the autowalks, switching to crosswalks, transferring to the express lanes, watching the great metagalactic liners unload their strange cargoes. They were on the 108th

level, and they could ride the express escalators to the top and watch the blue fires raging over the dome. But mostly it was best to be in their apartment, together with each other but shut away from the nine billion inhabitants of the teeming city.

Often Naomi went on the alignment trips with him, to preserve, the general told them, their relative ages. There was so much travel beyond the speed of light that Naomi would soon find herself the older if they did not take precautions, the general said.

And there was the day when Erle found that he was going to be the father of the first Earth-baby born in Regulus City. There was quite a celebration. The general sent him a box of cigars and a case of Scotch and other presents.

They named the boy Benjam. A daughter came presently, and they called her Maryl. A second son came and was called Regulus. All this time Erle was aligning engines. It was interesting work, and the general insisted on making provisions for the children to take long trips at high accelerations. "Otherwise," he said, "you'd find your children older than yourselves."

Yjul and Fyllath and Ekno had long ago gone back to their home on a planet of Gamma Velorum.

Then one day the general called Erle into his office. "We have finally accomplished what we've worked on so long," he said. "The perfection of a machine to align new engines from those already aligned. Up to this time the metagalaxy was still in precarious circumstances. You have aligned a great many engines, but the total is small compared to our demands. However, now you may have a rest. You've never been sick and you've never asked for time off. You have accumulated a great deal of back pay also."

Erle shrugged. "Everything was furnished for our living. We haven't needed money."

"At any rate, our option on your services has ended. I have instructed my secretary to return your contract, with a voucher for all back pay, and tickets to Earth for your entire family."

But Erle stared. Suddenly he felt useless, unneeded. He stared at the general. "What am I going to do?"

The general chuckled. "You will never lack for useful work. Your long experience with the metagalactic government will be worth decillions of ergs—pardon me, millions of dollars, for in all the Fourth Universe there are few who are accepted to work for the metagalactic government. An honorable discharge from our service is worth almost any sum you can name—if you want it."

Erle stared at him. "What do you mean exactly?"

"You've been away from Earth quite a while. You may find conditions different there. Your use-

fulness to Earth may be different from what you imagine."

Erle said thoughtfully, "I wonder what Earth *is* like."

"Planets change, the same as towns. When you first go back, it's all strange to you. Then you stay a while and somebody else comes along, and the newcomer is always a stranger."

Erle drew smoke deep into his lungs. "There's one thing wrong. Naomi and I are normal and all of our children are normal. We won't fit in on Earth."

Remiggon seemed to take a deep breath. "I was sure you would think of that."

There was a step at his side, and Erle looked up to see Naomi. He got to his feet.

"Please, both sit down," said Remiggon. "I have a story to tell you."

They relaxed, and Remiggon seemed to rest for a moment, collecting his thoughts. "I want you always to remember that you have rendered a great service to the metagalaxy. There are twenty million ships flying the star lanes at high velocity. The old trajectory freighters are being towed in by tractor vessels and equipped with power units. No longer does a planet have to wait thousands of years to get an element it needs."

The girl came in with a sheet of zinc paper and gave it to Erle.

"That's your check for your work for us," said Remiggon.

Erle frowned. "It looks like a million and eighty thousand dollars. There must be some mistake."

Naomi caught her breath.

Remiggon went on, "One of our ships hit forty-eight thousand metagalactic G's on the run from Fomalhaut. A trip that used to be scheduled for every five hundred years now takes place every thirty days. It brings all the galaxies closer together — solves problems and creates problems."

"What kind does it create?" asked Erle.

"Administration, for one thing. Take real estate. Many beings have become trillionaires and quadrillionaires speculating on terminal planets. With space sold by the cubic foot, you can realize it's like old days on Earth to the third power—and a great deal more." Remiggon sighed. "However, we prefer those problems to the ones of war."

"I would think so," said Erle, still wondering about the check.

"We have kept track of affairs on Earth for you. I recall you loaned most of your advance to a four-legged man."

"Yes. He probably lost it on dice."

"No. He nursed it very carefully, and now there is a B & W Midway on Jupiter which is worth a great deal more than that check, I am happy to say—for the check is hardly more than a token—under the circumstances."

"I—" Erle could say no more.

"We protected your interests," said Remiggon. "Although I must say that Wollansbe himself did everything possible. However, the thing has gone through many hands since then."

"Wait a minute," said Naomi. "This check is for a *billion* and eighty *million* dollars!"

Remiggon nodded. "Quite right, Mrs. Bertron. You have brains as well as beauty."

Erle said, "Let me see that thing again."

She handed it to him.

"The answer is," said the general, "that you've been gone longer than you realize. The reversal effect of ultra-C speeds is real, and we've kept a careful log of your light-second time. That's why your wife and your children have been with you very often on your trips. The net result is that you and your wife are almost the same age as you were when you came here. Your children are in proportion. "You have no idea how long you've been gone, do you?"

"Not now," said Erle slowly. "I thought twelve or fifteen years."

"You're in for a shock," said Remiggon. "You left Earth just over nine hundred years ago."

Erle sat very still. Finally he looked at Naomi and saw her white face.

"You're both good, healthy specimens," said Remiggon, "and you will survive this next shock when I tell you that the race of *homo sapiens* has been extinct for six hundred years."

Naomi gasped. Erle sat, dumbfounded. "Benjam is only fifteen years old," he said finally.

"Nine hund—" Naomi began, then said, "Then we are the only living representatives of human beings or Earth beings?"

"Almost. You certainly are the only living Earth entities who have ever seen Earth."

Erle said, "I'm sure you have more to tell us."

"As a matter of fact, I have." Remiggon seemed pleasantly amused. "The human race took a wrong turn in the evolutionary pattern. The metagalaxy cannot interfere with such things on a planetary level, but in this we had you two—both normal."

"But—"

"Earth is a beautiful planet," said Remiggon. "One of my favorites, with conditions perfect for propagation of a species."

"How could that be?" asked Naomi. "I don't want my children marrying one another."

"I anticipated that, and our scientists long ago went to the trouble of preserving—creating, you might almost say—another pair of Earth people."

"Created!" said Naomi. "Then they aren't human!"

"Why not? They are derived from human genes."

"I don't think—" said Erle.

The purple ball floated into the air and stopped before them both. "There is another thing I forgot to tell you both. It has to do with your own genesis."

They both stared at him.

"As it happens, you never wondered why you both were normal, did you?"

"I assumed it just happened," said Erle, bracing himself.

"It could have—but it didn't."

Erle reached for Naomi's hand.

"You are both test-tube babies, you know."

Naomi looked white.

"It's nothing to be ashamed of," said Remiggon. "The scientists took human genes and chromosomes and eliminated all the neurotic ones. Even absolute motion and absolute pitch, as we found out later, were implanted by them as experiments."

Erle said slowly, "That might explain a lot of things."

Naomi said, "And that's how you got another pair of humans."

"It was almost too late," Remiggon admitted.

Naomi looked at Erle. "We have neither father nor mother," she said slowly.

"On the contrary," said the general, "the entire human race is your ancestor—as the entire human race to come, if there is any, will be your descendant."

"You mean," said Erle thoughtfully, "it is for us to say whether we want to continue the human race."

"That's about it."

Erle said slowly, "If we went back to Earth—no factories, no manufactured things at all would be available. We'd have to do it all by hand."

Naomi got out of the chair. He stood up, and she threw her arms around him. "I *would* like to go back home," she admitted. . . .

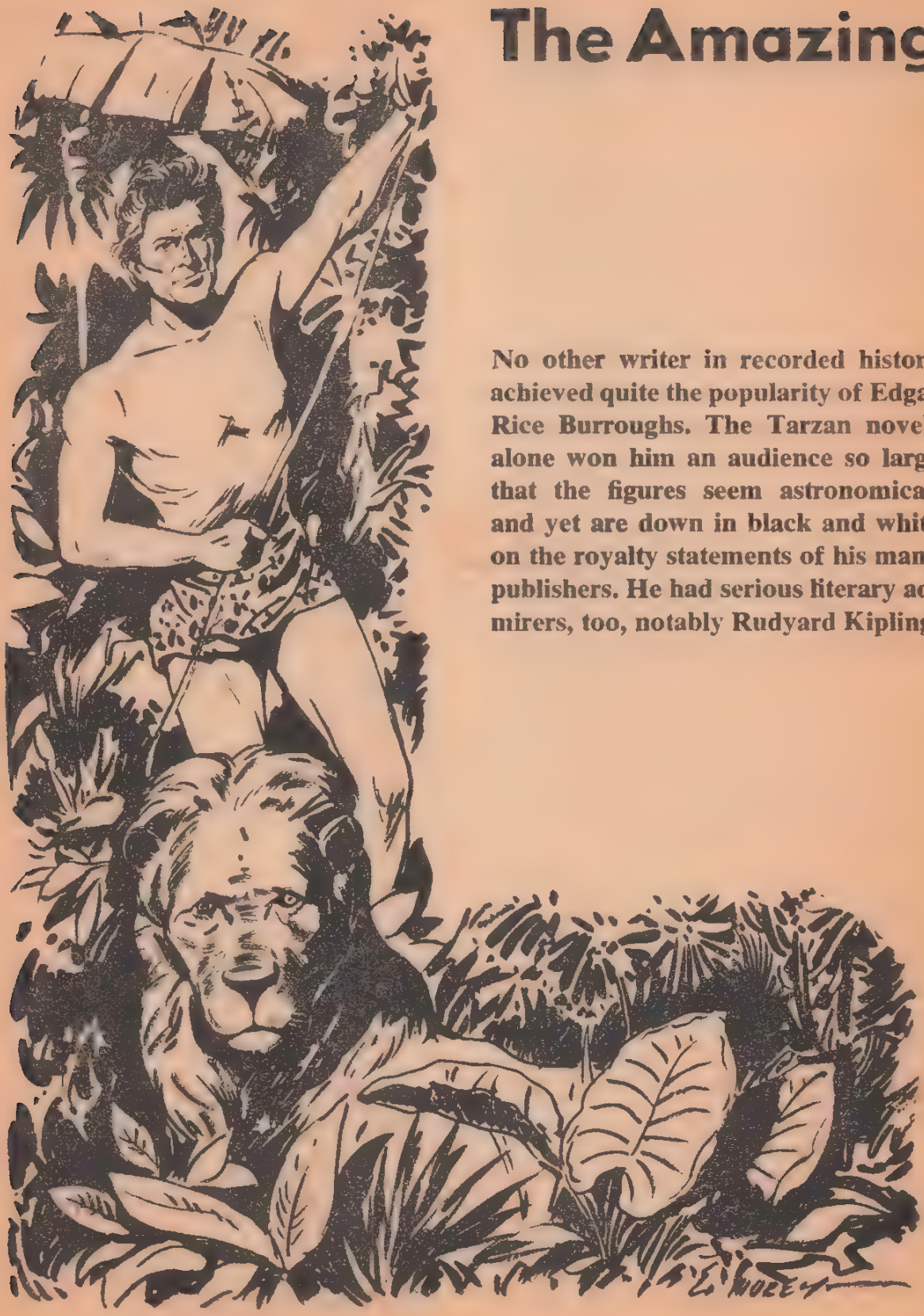
That afternoon they were packing. The three children were excited. Erle looked up at Naomi and said, "Do you realize that Man did solve his own problems after all? The race didn't die out."

"But—"

"There was something in the genes of the scientists who made us," he said, "that impelled them. They didn't know why—but the qualities necessary to avoid extinction were present, and they used them. Man didn't end up in a cultural cul-de-sac after all."

But as he closed the trunk, a thought struck him. Remiggon, the old fraud! He had seen fit to have another couple made to go back to Earth with them. Had he put the suggestion and the ideas of procedure in the scientist's minds in the first place? Erle wouldn't have put it past him.

The Amazing



No other writer in recorded history achieved quite the popularity of Edgar Rice Burroughs. The Tarzan novels alone won him an audience so large that the figures seem astronomical, and yet are down in black and white on the royalty statements of his many publishers. He had serious literary admirers, too, notably Rudyard Kipling.

EDGAR RICE BURROUGHS

By

SAM MOSKOWITZ

"TARZAN, LORD OF THE JUNGLE, is the great romance of the present day, surpassing in its popular appeal even the *She* and *King Solomon's Mines* of Rider Haggard's yesterday and the *Twenty Thousand Leagues Beneath the Sea* of Jules Verne's day before that," wrote editors Edwin Balmer and Donald Kennicott in the November, 1927 issue of BLUE BOOK MAGAZINE.

"The touch of the great romances of tradition . . . is in 'Tarzan' " they continued. ". . . The reader feels himself also partly the writer. He himself joins in the story-telling and calls upon his own imagination to share in the delightful business of creating romance.

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And that's just about the best fun there is."

Edgar Rice Burroughs, largely due to his creation of the almost mythical character Tarzan, far outstripped Jules Verne, H. Rider Haggard and H.G. Wells in catching public favor with his particular variety of scientific fantasy. Some of the Tarzan novels qualify rather adequately as science fiction—*Tarzan and the Ant Men* and *Tarzan at the Earth's Core* to name two—while the entire series is science fiction in spirit.

It is not necessary to rely upon borderline elements in the Tarzan series to establish Burroughs' reputation in the science fiction world. The first novel Burroughs ever wrote was an interplanetary—*Dejah Thoris, Princess of Mars*. It was literally a transcription on paper of daydreams engaged in by the author to divorce himself from the cold failures of his everyday life. Coupled with his born gift of story telling, the same fantasies were to act as an opiate, to make more bearable the problems of others.

Thomas Newell Metcalf, editor of ALL-STORY, bought that novel, which he re-titled *Under the Moons of Mars* and ran as a six part serial, beginning in the February, 1912 number of his monthly. For the first and only time in his life, Burroughs used a pen name. *Under the Moons of Mars* bore the by-line "Norman Bean," a typesetter's corruption of Burroughs' "Normal Bean," intended to imply that though the story was mad, the author was not.

So we see that Edgar Rice Burroughs' earliest love was centered on a world forty million miles beyond ours, the red disk of Mars, which at the turn of the century, had become a favorite topic of astronomical discussion under the impetus provided by Professor Percival Lowell's famous book, *Mars as an Abode of Life*. In that book, Lowell advanced the hypothesis that Mars was probably a much older world than ours; and that at one period in the past it may have supported a high order of civilization. That the so-called canals were actually artificial waterways, the creation of highly intelligent creatures, was, of course, his major premise.

Burroughs' Martian novels are framed against the background of a planet in decadence, where this great civilization of the past has given way to hundreds of ancient and diverse cultures, the product of a variety of semi-human tribal groupings, who carry on a senseless, violent and never-ending struggle against one another as a way of life. It is a world where savagery and science live side by side and where the strength of a man's sword-arm counts for as much as the achievements of science in the struggle for survival and power.

It seems a bizarre world, except for the fact that it bears a satiric resemblance to our own. The endless contest of strength and cunning in Burroughs' Mars is no more pointless and illogical than the military history of mankind, or the plot of the classic adventures of Ulysses in Homer's *Odyssey*. In fact, Burroughs' science fiction is a direct descendent of the type of travel-tale typified by the *Odyssey*. It is the traditional romance brought up to date with the addition of a few scientific trimmings.

This variety of science fiction has become known as the scientific romance. In stories of this nature, colorful adventure in a classical sense is seasoned with just enough science to lend wonder and enchantment to the background and locale. Edgar Rice Burroughs was to become the acknowledged master of the scientific romance, and the rousing enthusiasm that greeted his first novel was to usher in a golden era of escape science fiction. Indeed, the scientific romance was to dominate the direction of that literary form until the appearance of the first science fiction magazine in 1926 and remain a factor for ten years beyond that date.

The arrival of Edgar Rice Burroughs on the scene eclipsed the rising star of George Allan England, who had been active in the science fiction field since 1906 and whose novel *The Elixir of Hate,* published in THE CAVALIER in 1911, was already regarded as a classic on the theme of a man gradually growing younger until he becomes a child.

Almost concurrently with the appearance of Burroughs' first Mars novel, the magazine, CAVALIER, ran George Allan England's masterpiece, *Darkness and Dawn,* as a four-part serial, beginning in the January, 1912 number.

Together with its two sequels, *Beyond the Great Oblivion* and *The Afterglow,* the trilogy was published under the title of *Darkness and Dawn* by Small, Maynard and Co., Boston, in 1914. The book, which is today one of the most desirable of all science fiction collector's items, proved popular enough to warrant a number of editions.

George Allan England went on to compose other popular novels for the ALL-STORY CAVALIER WEEKLY, including the highly imaginative *The Empire in the Air* (later retitled *The Flying Legion*) and *The Fatal Gift.* But though *The Flying Legion, The Golden Blight* and *The Air Trust* were soon to follow in hard covers, he never attained more than a fraction of the universal popularity of Burroughs.

There were a number of reasons for this. First, Edgar Rice Burroughs *completely* divorced the reader from association with reality, and carried him off to a never-never world of his own cre-

ating. Secondly, Burroughs was a natural story teller. His style never jarred. It flowed along, quickly and smoothly, weaving the reader into the spell of the story. The reader was rarely called upon to think. Whatever messages appeared in the story were essential to the narrative.

Burroughs had an unsurpassed sense of pace and his ability to keep several situations moving simultaneously, coupled with his mastery of the flashback technique, established him as an authentic literary craftsman.

And by far the most important of all, Burroughs could make characters come full-bodily alive from the page, and achieve a maximum of reader identification. This was impressively evident in his initial Mars novel, where the first-person narration offered easy identification with John Carter, enabling the readers to share with him wondrously thrilling and romantic adventures. Particularly unforgettable was the memorable scene in the Mars air manufacturing plant, where the fate of the entire planet rested upon the ability of John Carter to telepathically open the doors that would permit a Martian to crawl in and start the stalled air-machinery functioning again.

It was this talent for apt characterization that was to provide a firm foundation for Burroughs' fame. He would have been a successful author if he had simply written the Mars novels. But the creation of the character Tarzan in *Tarzan of the Apes,* his second published novel which appeared in the October, 1912 issue of ALL-STORY, elevated him to literary greatness and world renown.

According to Alva Johnson, in his article, "Tarzan, or How to Become a Great Writer," published in the July 29, 1939 issue of THE SATURDAY EVENING POST, Rudyard Kipling was a great fan of the Tarzan stories, believing them to have been inspired by his own *Jungle Tales,* recounting the experiences of Mowgli, the Jungle Boy.

If the influence of any writer can be strongly discerned in the theme and style of *Tarzan of the Apes,* it would seem to be that of Rudyard Kipling. But Burroughs has stoutly and vigorously denied this. He has been quoted as saying: "I started my thoughts on the legend of Romulus and Remus who had been suckled by a wolf and founded Rome, but in the jungle I had my little Lord Greystoke suckled by an ape."

Characterization in Burroughs' novels was not confined to the lead character. Read a Tarzan story and the very lions, tigers, elephants, apes and monkeys come to life as distinct personalities in their own right. The effect is heightened by giving the jungle creatures names and identifying their peculiarities. There was the female ape who mothered Tarzan, Kala, and her

"husband", Tublat. They even had family quarrels over raising Tarzan. Numa was the lion and Sabor the lioness; Histah the great snake and Tantor the elephant. Through the magic of Burroughs' pen, all come into focus as three dimensional creatures.

In all the literature of mankind, only Sherlock Holmes is nearly as well known as Tarzan. This popularity is justified. *Tarzan of the Apes* is a great and fabulous adventure epic. The development of the story is inspired. The young English couple who are cast away on the shores of the Dark Continent . . . the child who is born to them in a primitive cabin . . . their deaths and the female ape, Kala, who finds and raises the child with all the patience and love of a human mother . . . the self-education of the ape-boy Tarzan as he grows to manhood . . . his encounters with human beings . . . his love for the English girl Jane Porter and, finally, his act of self-sacrifice when he steps aside to let John Clayton, a British nobleman, marry her, add up to one of the world's great romances, ending where his rival for the girl asks:

"If it's any of my business, how the devil did you ever get into the bally jungle?"

"I was born there," said Tarzan, quietly. "My mother was an Ape, and of course she couldn't tell me much about it. I never knew who my father was."

This is no corn, no Pollyannaish cliché. The hero does not get the girl. The novel ends on a realistic and powerful note. As a concession to readers, Tarzan does get Jane at the end of the sequel, *The Return of Tarzan,* but the artistry of the first story remains unimpaired.

With the loyal ALL-STORY readers almost out of their minds as to whether the atmosphere plant on Mars had been put back into operation in time to save the planet, Burroughs wrote a sequel to *Under the Moons of Mars* entitled *Gods of Mars.* It bore his own name this time and ran for five monthly installments, beginning in the January, 1913 issue of the magazine.

After learning that Mars had been saved, the readers sat back to revel in an even more enthralling series of adventures which culminated in a cliff-hanger of movie serial intensity. The book ends as Dejah Thoris, queen of Helium, most beautiful woman of the planet Mars and beloved wife of John Carter, is trapped in a revolving chamber with two other women, Thuvia and Phaidor.

The chamber, which revolves deep in the earth and permits entrance for only one day in a Martian year—almost twice as long as our terrestrial year—moves out of sight as Phaidor, who has developed a jealous passion for Carter, dagger in hand, lunges at Dejah

Thoris. Thuvia bravely attempts to slip between them. As the chapter ends the chamber closes and John Carter will not know for an entire Martian year whether his beloved has died under the knife of her murderous assassin.

Burroughs' first Mars novel, published in 1912, brought him less than a third of a cent per word or $400. His second Mars novel, published a year later and shortly after *Tarzan of the Apes,* brought many times that sum. Before the appearance of his first hard-cover book, *Tarzan of the Apes,* published by A. C. McClurg in 1914, he was earning twenty thousand a year from magazine sales alone!

Tarzan of the Apes proved a runaway bestseller, accounting for almost a million book sales under the McClurg imprint and many others when it went into the A.S. Burt and Grosset and Dunlap lower-priced reprints. These rewards came to Burroughs after he had attempted a score of jobs and businesses and considered himself a complete failure.

Edgar Rice Burroughs was born in Chicago, September 1, 1875. His father, a manufacturer of electric batteries, sent him to a number of private schools. He flunked entrance exams at West Point and gave up hope of a military career. At the age of twenty-five he married Emma Centennia Hulbert and went to work in his father's battery plant at fifteen dollars a week. In the next ten years he tried a procession of jobs and enterprises, including shop-owner, clerk, cowboy, railroad policeman and goldminer. He failed incessantly at a series of selling jobs and shortly before he made his first fiction sale, he was said to have ghost-written a book on how to be a success in business.

He claimed that the early Mars stories were a literal transcription on paper of the day dreams in which he reveled to find escape from the hopelessness of his life. The Munsey magazines were the leading publishers of science fiction during the first quarter of the century. Made desperate by his plight, Burroughs correctly surmised that a wild opus about the planet Mars might find sanctuary there.

The fact that he did not find his mark until the age of thirty-five has been pointed to by Burroughs as proof of his ineptness in business matters. The facts do not bear him out. It is doubtful if any writer in the history of literature earned more money than Burroughs. Before his death, he admitted to having assembled an estate worth over ten million.

The adroitness with which he merchandised his products, successfully obtaining magazine, book, reprint, newspaper syndicate, radio, cartoon and moving picture sales for the greater part of them, and the new Tarzan movies released annually, indicated business ability of the highest order. While

he never undersold himself he never priced himself out of the market either. He was an easy man to do business with, agreeing without pressure to changes deemed necessary to adapt his work to various media.

An editor could revise a Burroughs story for magazine publication and never hear a word of complaint from the author. However, the hard-cover edition would always contain Burroughs' original version. Upon examination of hard cover with magazine versions, it is hard to find a single instance where the editor was right in tinkering with the proven formula of a superlative storyteller who, in the final analysis, knew better what the public wanted than any other writer of the first half of the twentieth century.

With *Tarzan the Invincible* in 1931, he formed his own publishing company, Edgar Rice Burroughs, Inc., situated in Tarzana, California, a town named after his most famous character. Though it was a period of bitter national economic depression, the venture proved well-starred. Burroughs was to demonstrate that he was a better businessman than his previous publishers when, in 1949, he re-issued ten of the Tarzan Series which he owned book rights to and the entire Mars and Venus series as one dollar reprints.

Other publishers, following the fashion of literary thought prevalent at the period, claimed that the mood of the times had left such works behind. As orders for millions of copies poured into Tarzana, Burroughs, almost with a humble note of astonishment, told a reporter for WRITER'S DIGEST, "The books are selling better than ever."

The Gods of Mars was followed in 1913 by *The Cave Girl,* in which a skinny, over-protected Bostonian is stranded on a Pacific Island where a primitive cave culture still exists. Casting off the veneer of civilization, he rebuilds himself into a Tarzan-like character, survives and wins for his mate a beautiful cave girl. *The Man Without A Soul* in 1913, later appeared in book form as *The Monster Men* and deals with the creation of synthetic humans through the use of tissue-culture. It is unquestionably one of the pioneer stories of its type and Burroughs later used the theme in *The Synthetic Men of Mars.*

The skillfully executed *Eternal Lover,* a tale of a prehistoric man, who falls into a state of suspended animation and wakes to find himself on Tarzan's estate in Africa, was Burroughs' first offering for 1914, and was followed a month later by the opening novel in the Pellucidar series, *At the Earth's Core.* This exciting story postulated that the center of the earth was hollow, and its interior another world—heated and lighted by the

molten core of the earth which hung suspended like a sun at its center. It was an ideal setting for marvelous adventure and Burroughs was eventually to write five sequels: *Pellucidar, Tanar of Pellucidar, Tarzan at the Earth's Core, Back to the Stone Age* and *Land of Terror. The Land of Terror* has appeared only in book form and is one of the rarest of all Burroughs novels.

The magazine publishers could not gainsay the monumental popularity of Burroughs' work. Up until the advent of Burroughs, the influence of Jules Verne and H. G. Wells was primary upon the development of the field. In England, George Griffith, taking a more adventurous tack, but still predominantly guided by Verne's logical method, had turned out interplanetaries like *The Honeymoon in Space;* future war stories such as *The Angel of the Revolution, Olga Romanoff* and *the Stolen Submarine;* a prediction of weather control in *The Great Weather Syndicate;* future air stories like *The Outlaws of the Air* and a score of other science fiction and fantasy volumes. His popularity was limited primarily to Britain, but there it was extremely great, his better books going into a number of editions.

In addition to George Allan England, America had the popular astronomer, Garrett P. Serviss, writing with a note of scrupulous scientific accuracy his sequel to Wells' *War of the Worlds,* titled *Edison's Conquest of Mars;* his famous interplanetary *The Columbus of Space;* the swashbuckling saga *The Sky Pirates,* and most famous of all, *The Second Deluge,* probably the greatest science fiction novel yet written based on the biblical legend of the Great Flood.

These were both men who took the scientific knowledge of the present and convincingly extrapolated from it, trying to keep from straying too far from what was theoretically known to be possible. Their tales took place in the world as we know it and, given certain postulates, might conceivably occur. Burroughs verged sharply from their method. He divorced the reader completely from reality. His background, while made readily acceptable by his own brand of artistry, was no more real than L. Frank Baum's *Land of Oz.* His aim was to provide pleasure through complete escape and he succeeded.

Charles B. Stilson was one of the first to follow Burroughs' lead, offering his renowned trilogy, opening in the December 18, 1915 issue of ALL-STORY WEEKLY with *Polaris—of the Snows* and following through with *Minos of Sardanes* and *Polaris and the Goddess Glorian.* The never-never land of Stilson was a volcanic valley in the antarctic and his hero Polaris is a Tarzan in his own right.

In all objectivity it must be pointed out that the mark of George Allan England is also to be found in the style and handling of Stilson as in that of many of the other scientific romanticists.

Austin Hall, a writer capable of writing science fiction in the tradition of Verne or the scientific romance of Burroughs, was the next to conform, thrilling his readers with *The Rebel Soul, Almost Immortal* and, in collaboration with Homer Eon Flint, *The Blind Spot*.

J. U. Giesy, who had been writing scientific detective stories, science fiction pranks and oddments, turned to the scientific romance in 1918 with *Palos of the Dog Star Pack* and went on to the popular sequels, *Mouthpiece of Zitu* and *Jason, Son of Jason*.

From that point on there was a veritable flood of great talent attempting the pattern. Most of the authors are so famous in their own right that little elaboration is required. The great A. Merritt belongs to the group as does explorer into the atom Ray Cummings, Victor Rousseau, Ralph Milne Farley, Otis Adelbert Kline (who most closely imitated Burroughs), Francis Stevens, and to a limited extent, Murray Leinster and Garret Smith. Innumerable others also made more or less regular excursions into the realm of the scientific romance, contributing their bit to an era of nostalgically memorable scientific enchantments.

Literary critics, judging Edgar Rice Burroughs by absolute literary standards, have never been kind. They have pointed out that his plots are repetitious, his prose construction often hasty, with an overwhelming emphasis on action and violence and the fact that some of his novels seemed to be a pointless procession of incidents rather than a completely coordinated whole. Most sternly they condemn him for any lack of significance to our times in the themes which form the essential framework of his efforts.

Burroughs never denied the charges and with almost a note of apology frequently explained that it was his purpose to write for those who desired entertainment and escape and that he expected his works to be judged by that standard. He noted that his books were clean without being prudish and while he did not know if they had potentialities for good, he was sure that no one had been harmed by them.

The truth is somewhat removed from either the viewpoint of the critics or Burroughs' claims. As far as literary worth, it seems likely that at least *Tarzan of the Apes* will be printed and read long after many authors "with pointed messages for our times" have been forgotten.

As far as food for thought, Burroughs did try to convey a message of social import on many signifi-

cant subjects. *The Mucker,* published in ALL-STORY in 1914 deals with the influence of environment on character. Billy Byrne was Burroughs' Studs Lonigan, raised in the rough West Side of Chicago, "there was scarce a bartender who Billy did not know by his first name . . . he knew the patrolman and plainclothesmen equally as well, but not so pleasantly."

For at least half of its length *The Mucker* is a revelation as to the power Burroughs was capable of commanding when dealing with grim realism instead of escape. *The Girl From Hollywood,* originally published by MUNSEY'S MAGAZINE in 1922, is a straight-from-the-shoulder exposé of drug addiction in the film capital; *The Oakdale Affair,* which first appeared in BLUE BOOK for March, 1918, forcefully dramatizes the author's disgust at mob violence and lynching; *The Girl From Farris's,* ALL-STORY WEEKLY, September 23—Oct. 14, 1916, has as its central theme prostitution; *The Efficiency Expert,* from ARGOSY-ALL STORY, October 8—29, 1921, is a prototype of behind-the-scenes-doings in big business along the lines of *Executive Suite;* and *The Outlaw of Torn,* NEW STORY, January—May, 1914, is as carefully researched a historical novel as you are likely to read anywhere.

All of which proves that Burroughs was far from being a writer without social conscience. It was simply that he discovered that other authors could play that role with greater impact than he. To refuse to recognize that fact and waste the great talent he possessed for entertaining millions would have been pointless.

Forgetting absolute literary standards, by the standards of the science fiction devotees, two Burroughs novels are most frequently nominated to become established classics. Those two are *The Moon Maid,* a trilogy collected into a single book in 1926 and *The Land That Time Forgot,* another trilogy unified into a single volume in 1924. The means of interplanetary travel in the early novels of Mars was so ill-defined as to border on the mystical, but in *The Moon Maid,* the Mars of John Carter supplies Earth by radio with the plans for constructing a space ship which functions on reaction principles.

Led by a renegade Earthman, the people of the moon invade and devastate the Earth. Primitive Earth societies evolve in the wilderness and eventually, the descendants of the Americans drive the Moon Men from the North American continent. Though sections of the science are dated today, the scenes depicting the reconstruction of civilization are superbly conceived.

The Land That Time Forgot deals with the discovery of a giant island in the South Pacific, where prehistoric creatures still survive

There are also seven species of human beings, in various stages of evolutionary development. In a single lifetime, these creatures evolve in steps from a point a little higher than the ape to humans comparable to modern man. This concept is a highly original one and most other elements of the book are as well thought out and effectively developed.

Burroughs early Martian stories all went into hard cover. *Under the Moons of Mars* became *The Princess of Mars* to be followed by *The God of Mars, The Warlord of Mars, The Chessman of Mars* and *Thuvia, Maid of Mars.* All of these were rollicking, swashbuckling scientific romances in the grand tradition. None of them displayed too careful a regard for scientific accuracy until the appearance of *The Master Mind of Mars* in 1927. This novel was first published complete in AMAZING STORIES ANNUAL, 1927.

The title and the author's name were featured on the cover in larger letters than the magazine's logo! AMAZING STORIES ANNUAL was intended to test the feasibility of publishing a companion to AMAZING STORIES and a big name was needed to help put it over. Hugo Gernsback had previously reprinted *The Land That Time Forgot* in AMAZING STORIES and claimed that all he did to obtain *The Master Mind of Mars* was to write Burroughs asking him for a novel with some good scientific thought behind it.

Except for the opening scene, where the story's hero, Ulysses Paxton is initially *wished* to Mars, the inventions and machinations of Ras Thavas, Martian scientific genius are thoughtfully delineated. The novel also contains surprising amounts of philosophy. It is difficult to believe that Burroughs wrote this novel especially for Gernsback, yet it is even harder to conceive of ARGOSY-ALL-STORY or BLUE BOOK rejecting it merely because it was more thoughtful than the others. Certainly not BLUE BOOK, which, during this very period, thought nothing of giving *six* covers, one for each installment, for a serialization of an Edgar Rice Burroughs novel. What is probably closer to the truth is that Burroughs, a good businessman and skillful professional, would not decline a good offer from anyone and would write to order for a guaranteed sale.

Of very great interest is the serialization of *Tarzan and the Lion Man* in LIBERTY MAGAZINE, beginning with the Nov. 11, 1933 number. LIBERTY, then a leading weekly slick along with the SATURDAY EVENING POST and COLLIERS, solicited this story from Burroughs. The style is slick-magazine throughout. The novel is loaded with dialogue and it is often good dialogue. The sentences are direct and modern and crisp. The book

version does not differ from the magazine one—a good bet that it was Burroughs' original.

Considering the fabulous popularity of Tarzan, the question has often been raised as to why Burroughs bothered to write anything else. Of his 57 published books, 22 have featured Tarzan. Burroughs has been quoted as claiming thirty-five million sales for all of his hard cover books in North America alone. Of this number, he only credited fifteen million sales to Tarzan. The 36 other books accounted for another twenty million sales which is an average of better than half a million copies per title. While we know a few to have been 'lemons', we can see where his science fiction tales of Mars, Venus and Pellucidar, must have enjoyed greater popularity and profit than is generally believed.

During World War II, though a man in his sixties, Burroughs served as a war correspondent and suffered several heart attacks as a result. Ill almost to the point of becoming a semi-invalid, he knew that he did not have long to live. In a forward to *Llana of Gathol*, probably the best-written of all the Martian books—it was published just before his death in March, 1950—John Carter, the character that first brought his creator success reappears to him. Here is the episode in Burroughs' own words:

". . . I never expected to see you again."

"No, I never expected to return."

"Why have you? It must be something important."

"Nothing of Cosmic Importance," he said, smiling, "but important to me, nevertheless. You see, I wanted to see you."

"I appreciate that," I said.

"You see, you are the last of my earthly kind whom I know personally. Every once in a while I feel an urge to see you and visit with you, and at long intervals I am able to satisfy that urge—as now. After you are dead, and it will not be long now, I shall have no Earthly ties—no reason to return to the scenes of my former life."

"There are my children." I reminded him. "They are your blood kin."

"Yes," he said, "I know; but they might be afraid of me. After all, I might be considered something of a ghost by Earth men."

"Not by my children," I assured him. "They know you quite as well as I. After I am gone, see them occasionally."

He nodded. "Perhaps I shall," he half promised.

To date he never has.

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PENTAGRAM

An Exciting Tale of Tomorrow's Folly

by ARTHUR SELLINGS

THE COPTER STATION had been blotted from view by a fold of the hills behind him, and Smith was now in open country. Real back-to-nature country, deep and green. A benevolent sun shone down and a light breeze whispered ingratiatingly, cooling the five brows of Smith.

Five plaid-clad chests breasted the rural afternoon. Five pairs of nostrils breathed in the living air. Ten stout-shod feet strode out along the rough road.

Boots boots boots boots
Tramping up and down again
Boots boots—

Surprisingly, it was Analytical Smith who was singing, in a voice that clearly betrayed its lack of practice.

Head Smith felt an annoyance that communicated itself instantly to the rest. But not to Analytical.

"Boots boots boots boots—"

"Hey, cut it out," said Head Smith curtly. He said it aloud, too, which was so unusual for a head to a member that it penetrated Analytical's raucous rhapsody, and brought him to an abrupt halt, blinking owlishly.

"If we're going to sing, then we'll agree to sing," said Head, but normally now, in rapport. *"Agree. And sing."*

"But that *was* singing," Analytical protested. "That's an old folk-song, the battle song of the kiplings. That was a tribe that existed way back in the Primitive Ages and—"

"What a ragbag of knowledge!" observed Constructive sadly.

"It's a lousy song anyway," said Sensibility Smith, yawning. He was

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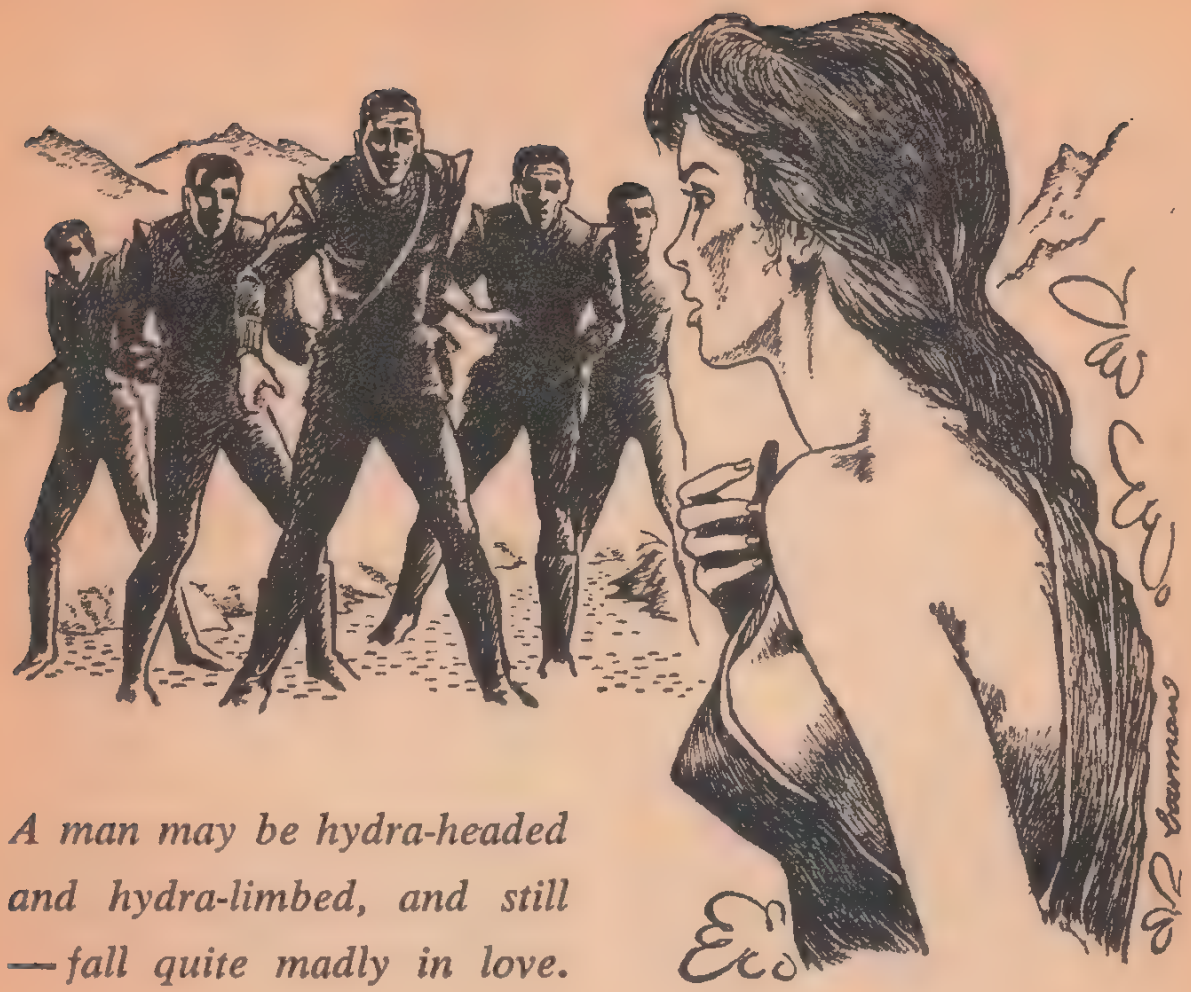


A man may be hydra-headed and hydra-limbed, and still —fall quite madly in love.

rather bored with the *naïveté* of natural things. *He* had wanted to spend Smith's holiday in the Museum of Electronic Arts, but only Constructive had supported him. Head and Analytical had flinched at the notion, electronics smacking too much of work for their liking. And Physical Smith—what else could you expect of *him?* This rural excursion had been his idea exclusively.

"Now, if we're going to sing a song," said Physical, "we'll do it in numbers—just like a gymnastics session." He leered robustly, making the rest, even Analytical, shudder.

"That's beside the point," said Head quickly, feeling his authority being undermined. "The plain fact is that you, Analytical, have no right to sing aloud just on your say-so."

"Chaos!" complained Analytical. "This is a *holiday,* isn't it? A few hours spent in throwing off inhibitions never did anyone any harm."

"Ha! Listen to who's talking!"

That was Physical. "Why, it was your inhibitions that steered us away from a good thing in that King woman. You analyzed her right out of the picture."

A wordless sense of loss diffused from Constructive.

"Yes," said Sensibility. "And she had the best pair of legs on her Physical that I've seen for a long—"

"All of you, shut up!" interrupted Head in a tone that was so mentally shrill it hurt.

"Hey, steady, old man," said Constructive, pained.

"All right, I'm sorry," grumbled Head. "But all this talk of inhibition makes me ill. It's all right for you to talk about it, but who has to do the balancing? We're all inhibited if you come right down to it. Physical's weak on thinking, and Analytical's weak on feeling."

"Who's weak on feeling?" demanded Analytical with all the belligerence of the puny.

"Oh, shut up!" said Head, beaming a charge of personal vehemence in his direction. Analytical subsided, glowering.

Head derived a quite primitive pleasure from that, and continued much more agreeably: "I knew it was a mistake—coming away impulsively like this without having a check-up first. What do you say we turn back now, take the next copter back to City and get integrated? It will only take a day, two at the most, and it will be well worth it. We can start right out again."

"It wouldn't be the same thing," said Analytical moodily.

Physical said, "I know exactly what would happen. Sensibility would say it's not worth it—coming back, I mean. Then he'd do his best to wheedle us into that ghastly museum."

"No such thing," protested Sensibility. "But it's certainly no use going on like this, absolutely unintegrated." He passed a pale hand across a damp brow. "How can I contemplate with so many distractions?"

"A fat lot of contemplating you're doing," said Analytical heatedly. "You've got no feeling for Nature at all. In fact, I'm not sure that our lack of harmony isn't entirely the result of your own sulky attitude. You might as well have stayed at home."

"*O-oh!*" shrieked Sensibility. "Hear that? He's being positively primitive."

"Yes, what *has* got into you?" said Head. "Talking of dismemberment like that is sheer masochism.

"More like schizoid sadism," mused Constructive. "Now that's interesting. If an Analytical showed signs of sadism towards someone else's Physical, and if that person's Sensibility were to—"

"That's quite enough," snapped Head.

Constructive, who was by nature

the most equable element, obediently stopped, but his thoughts went murmuring on in their collective subconscious like a cloud of gnats.

"Well, I think I'm right," said Analytical. "We *need* to relax. What's the sense of taking a holiday otherwise? But there's no need for us to get steamed up about it." He beamed reasonably. "It seems I started it by singing that song. It was a mistake and I apologize. If I annoyed us, I'm deeply sorry."

"Ah, that's better," said Head. "The truth is we're *tired*. We've had it pretty hard these last few weeks. So let's enjoy ourselves. It would be a pity to waste such beautiful country as this, even for a couple of days. If Sensibility isn't so interested and wants to go off on his own—figuratively speaking, of course—then well, it's his holiday. We'll manage. But, Sensibility, come on in when we need you. I'm told you get sunsets here like nothing we get in City. And there's a wood five miles on, with real deer—or so the guidebook says. We'd miss you if you weren't with us."

Sensibility felt annoyed that the cause of the trouble seemed to have been transferred to his shoulders. *"Sunsets. Woods. Deer,"* he said contemptuously. He heaved an exaggerated sigh. "Well, all right. Anything for a quiet life. But be insistent if you come to anything *nice*." He pronounced the word with a mental sneer. "I might miss it otherwise."

Head suppressed his irritation. But it returned and displayed itself when Sensibility started immediately to make entirely abstract patterns, and lurid ones at that. "Cut that out, for Order's sake! That's quite out of tune here in the country."

Sensibility flared up. "Well, there's justice for you! Live and let live, can't you? If you want to enjoy the idiotic country, go ahead. But leave me in peace, please. *I'm* tired, too, you know. I've taken just as severe a beating as any of us."

"What?" said Analytical scathingly. "Don't make me laugh. It's Constructive and me who had the grind. Multi-unit planning's strictly functional. Even old Physical had more to do than you."

"Hear that!" Sensibility shrieked. "That's the second outright schizoid statement he's made today. No integrated member of a person casts aspersions on another member's functions."

Physical, whose thought reactions weren't of the quickest, stirred angrily and growled in a mental basso, "What do you mean, *old* Physical, you skinny rat?"

"It's a conspiracy against me," Analytical wailed.

To keep out of it, Constructive started on a complex multi-dimensional series in such desperation that it only made matters worse

for every member, throwing the unintegrated Smith into a state of utter chaos.

Spirit of Order, prayed Head, close to panic. Just when he thought he had them fairly well under control, too. There was nothing else for it. He let out a bolt of absolute command.

Smith fell instantly into shocked silence. He tottered weakly, all five of him, to the grass by the wayside, and sank down, trembling. The only thought that flickered now between his members was a dull resentment against Head. It was only slightly tempered by a recognition that Head suffered just as much as they did. There was no escaping such power as that. Head got it all back, reflected by rapport.

"That's better," said Head after a time. "We can only thank the Spirit of Order that such a catastrophe didn't happen in City. You know what *that* would have involved."

A shudder ran through Smith. He knew, all right. It would mean being split up, with the only survival alternative that of being linked up with other units in a new experimental person. But only after long and punitive probation. Moreover, new persons, starting in the middle of adult life, rarely hit it off—and when they did, only at a humble, frustrating level. There was too much against them —not only consciousness of past failures, but the vigilance of the authorities, the sheer agonizing *wrench* of it.

"I'm sorry," said Sensibility.

"Me, too," said Analytical.

"And me."

"For and to all of us, then," said Head. "Sorry."

"Hey, me too," said Physical. He grinned.

The others both saw and felt that grin, and recoiled. They knew what was coming. It was the inescapable natural reaction and corrective to the rare infliction of absolute command. Even Head recoiled, but he knew with the rest of Smith that it couldn't be escaped.

"Right," said Physical, leaping with alarming robustness to his feet and unzipping his bag. He drew out a collapsible tube which he extended to three feet of flexible wickedness. "Now—who's for gym?"

Smith rose, feebly and protesting vainly, to the other eight of his feet. *He* was . . .

After an hour of vigorous exercises, Smith stretched out exhausted. But at least, Head was relieved to know, harmony had been restored. He didn't know for how long, or even how stable the new adjustment would prove to be when it was put to the test. But it persisted through the rest of the afternoon and into the evening. Even Sensibility responded to the sheer novelty of sitting round a

primitive camp fire, and the association-patterns he made of the dancing flames delighted all of Smith.

And then, as the last flames died away and Smith felt pleasantly drowsy, Constructive found such highly imaginative images in the embers that Smith passed into sleep as integrated as if nothing unpleasant at all had passed to mar the first day of his vacation.

He woke up next morning in the same integrated mood. Head, looking back on the day before, reflected that he had probably been over-anxious, like the rest of Smith—too hair-trigger apprehensive and keyed up. Wasn't the first day of vacation always difficult, with one's members getting a bit unruly? He could smile at it now. Now Smith could *really* start having a good time.

His good humor naturally spread through the whole person. He noticed that Analytical picked up Sensibility's sleeping bag for him. A quite needless act, but it was one of those nice gestures of internal courtesy that showed a really integrated individual.

Head was so happy that he himself broke into song as they went on their way. And on a tide of general goodwill he gladly gave up his practical monopoly of voice, so that they all broke into a chorus. Head smiled. They all smiled. Analytical was right. A relaxing of inhibition, of custom, hurt nobody.

So he went singing raucously over hill and dale. Dew hung like diamonds on grass and bush and the light morning mist crept away before the warmth of the mounting sun. Butterflies came out to flutter and flaunt their colors, emerald and gauzy pink.

Spirit of Order, but this was the life, thought Smith.

Birds sang—much more tunefully than Smith, but he felt no resentment at all. Rather, he felt a kinship with the whole of nature. For it seemed that all the simple forms of life were in glorious harmony with his mood. Even on the pitiful rudimentary level of single existence they seemed to be striving for a pattern of integration in homage to man—to Smith.

We ain't got a barrel of money,
We may look ragged and funny,
But we'll travel along, singing a song.

Side by side—chanted Smith, echoing the quaint words of a folk-song of the distant past.

And then he stopped singing abruptly, uneasily conscious that someone was looking at him.

It was a girl. She was standing very still, regarding him from between the leafy gaps of a bush with a look of amazement in her eyes. Amazement and — amusement.

Smith halted as the girl stepped boldly out of her cover. She had

short blonde hair, but her skin was tawny, and there was a lot of it for Smith to admire, her only garment being a scanty kind of primitive shift.

For a moment Smith looked for the rest of her. She was someone's Physical by the look of her. But he saw no other members about, and then he remembered. In some parts of the deep country people were as simple and single as animals, living entirely in the old manner.

Smith felt momentarily at a loss. He had never met a single-cell person before. But Head rallied to say, "Good morning. Lovely day, isn't it?"

"Mornin'," said the blonde, hands on hips, surveying them. "Gee, but you're a quaint lookin' bunch."

Smith could have roared his five heads off. Fancy referring to one person as a bunch! "Am I?" said Head.

"And your friends," she said, her nose wrinkling with amusement.

Holy Order, thought Smith, she doesn't know then. Was the country so out of things as that?

"I'm from City," Head explained. "I'm on vacation."

"From City? Gee, I never seen City folk before."

"And I never seen country folk before," said Head, aping the quaintness of her diction. All of Smith grinned.

The blonde sniffed at that and turned away from Head. Her gaze stopped at the small figure of Analytical. "Well, what d'you know. What a cute little feller." She went up to him, and ogled him.

Analytical blushed in embarrassment, and the pinkness was sympathetically duplicated on the cheeks of the other four members. Remembering what had happened the day before when he had voiced himself personally, Analytical sent a call for help to Head. Head promptly said to the blonde, "I'm afraid I have to be going."

The blonde turned briefly to scowl at him. "Okay, blow if you want to. I'm talkin' to the little feller here."

Head cursed his stupidity in not having used the first person plural for her ignorant benefit, but it was too late now. "Let's move," he said silently and grimly, voicing the united impulse of Smith.

But not quite united, unfortunately. The blonde blocked Analytical's path with her ample and half-naked form. He flashed a frantic call to the rest of Smith for understanding. And then—

And then the call petered out. He was gazing into the blonde's round blue eyes when he suddenly felt the embers of old and primitive fires stirring in his blood. He gulped, hesitated, and then said, boldly, "Hello, beautiful."

He did not notice that the rest of Smith had fallen back in

shocked silence. He was too absorbed in the blonde's reaction. She snuggled up against him, murmuring in a husky voice, "My name's Belle. What's yours, honey?"

"Huh, ah—Smith."

She giggled. "No, silly. Your *first* name."

"Why, Ana—I mean, Freud."

"Freud? That's a queer christian name to be wearin'."

"It's the name of one of the old gods," he explained patiently.

"Well, that just goes to show—Freud!

"I never even heard of that one. Still, I'll call you Fred. Will that do?"

"That's fine," said Analytical. *"O-oh!"*

"Why, what's the matter, honey?" said the blonde consolingly.

But Analytical didn't answer. He was resisting a stream of furious command from Head.

"What the blazes are you up to?" Head demanded irately.

"I'm only being civil," explained Analytical.

"That was a bit more than civil," said Physical, leering. "I can recognize the kind of thoughts you were having."

"And they're certainly misdirected," said Sensibility. "That upper structure is definitely hypertrophied. She's quite misshapen, in fact."

Constructive was having no such aesthetic reservations. He was too busy plotting curvilinear sections.

"As for me," said Physical, "I don't fancy her one bit."

"That's all beside the point," said Head testily. He addressed himself to Analytical. "The very thought of your communing with a primitive one-cell is disgusting." He shuddered. "Besides, it's not your job."

Analytical found himself gazing into the blonde's china-blue eyes again. She had sidled round and was pouting appealingly at him.

"Now, come on," ordered Head curtly.

"Oh, go to chaos," said Analytical, suddenly utterly reckless. "This is something different, something I've missed all these years. This is *real.*"

He put his arm defiantly about the blonde and started to lead her away.

This was a crisis. Head recognized it as such, and knew that it called for absolute command, however drastic the outcome. But he couldn't exert his full power for a second time in twenty-four hours without first serving warning.

When Analytical received the warning he faltered. But he had no need to protest. The other members did that for him.

"Not again!" shrieked Sensibility. "It would be too much."

"No, *please,*" beseeched Constructive.

"I *will,*" said Head sternly, "un-

less Analytical comes to his senses."

Analytical felt a sudden impulse to flee, but he knew that Head could exercise absolute command before he could get out of range. Still—he did not lower his arm from around the girl's waist. She, for her part, was looking slightly puzzled.

"I know," said Sensibility quickly. "Let's compromise. If Analytical's so set on this creature, then we may as well face it. Anything's better than absolute command. Let Physical take over his rightful job."

"That's not the same thing," Analytical protested. But he had the good sense to realize that he would have to compromise. And after all, even if it would be at second-hand, it would still be a new experience. Smith had never made love to such a primitive female before.

"We-ell, all right, then," he said.

"Very well," said Head resignedly. "I still think it's suspect. But there's nothing against it, I suppose. Perhaps it comes under the heading of letting down our inhibitions. All right, Physical, take over."

"Oh chaos!" said Physical. "Do I *have* to?"

Sensibility, for all his aesthetic antipathy to the blonde, was beginning to enjoy the situation. "What's the matter, Physical? Have you gone soft on us? Why, I should have thought she would have appealed to you, upper structure hypertrophy and all."

"Aw, she's not my type," said Physical sullenly. That wasn't the real reason. The real reason was that he always went into action as part of an integrated person. He shrank from taking over cold like this.

By now the blonde had become quite perturbed. "What's the matter, Fred honey?" she cooed. "You seem so far away."

"Er—was I? Sorry, but it's the others. There was something troubling them."

She looked puzzled for an instant. Then she pouted. "I'm not sure I like them. Specially that one." She indicated Head.

"Oh, I'm not—I mean, *they're* not a bad lot. They're just a little annoyed at the moment."

"Why? 'Cos little me picked little you?" She tickled him under the ear with grateful lips. He quivered.

"Well, something like that—" He turned apprehensively as Physical lumbered up. "Er — look, honey. I'd like you to meet a . . . a friend of mine."

"Oh, not *now*, Fred." Her generous bosom heaved as she sighed. "Oh well." She turned briefly to Physical. "Pleased to meet you, she said.

"Hello, honey," said Physical awkwardly, conscious of Sensibility

laughing like mad in his mental ear.

"Drop dead," said the blonde amiably over her shoulder.

"But you don't understand, honey," Analytical said beseechingly. "Oh chaos — excuse me a moment."

To make his agitation less conspicuous he walked back to the rest of Smith. Physical just stood where he was, looking awkward.

"I'll have to explain to her first," said Analytical. "She just doesn't understand."

Head heaved a sigh. "Well, you know what *I* think. Still, explain it and let's get it over with."

"You needn't be some mechanical about it," Analytical flashed as he turned and rejoined the blonde. He led her away—away from the glowering Physical and to the fringes of the mental rapport which emanated from the rest of Smith.

"Ah, that's better," she said, putting her arm round his waist and under his loose shirt.

He found the touch of her cool fingers exquisite. He had never felt such a touch in all his life—not at first hand. But he had to resist, to explain.

"You see, honey, I'm not just—just me, the same as you are you."

"How do you mean?" She looked puzzled, then she brightend. "Oh, that's just one of your cute City expressions. You mean you're just lost in love. Me too, sugar."

"No, no, it's not that. It's—"

"You mean you *ain't* in love with me?" she pouted.

"Of course," he said despairingly. "Of course, honey. But back in City things aren't as straightforward as they are here. Everything's more complicated. Jobs and everything. So complicated that one man just can't manage. So we pool our resources. It's been that way for centuries now."

She was looking at him as if trying to humor him. *Chaos!* he thought. Just how did you explain Complete Man to a rudimentary? But he had to try.

"You see, I'm not complete Freud Smith any more than the others there. We're all parts, and we act together. Now do you see?"

Her reaction was swift and surprising.

"Yep, course I see."

He gulped with surprise. He hadn't expected it to be so easy. "You—you do?"

"Course, an' I think that's right nice of you to think of your friends like that. But, all's fair in love an'—"

He groaned. "But I don't think you've got it, honey. Look. Each member of a person is graded when he's young according to what he's good at. Then he's joined with other members in one balanced person. By the time a person's twenty he's fully attuned. His

members live together, work together. So naturally they make love together."

She shrugged. "Sounds screwy to me."

"But it's not screwy. It's just a stage on. And it couldn't be any other way. The point is that only one member of the group does the love-making."

She guffawed. "Well, of all the dern silly arrangements. What do the others do then? Go for a walk?"

"Oh no," he said, smiling. She seemed to be getting the idea at last.

"You mean—" she said, horrified. *"You don't mean to say the others just stand around an' watch?"*

Analytical found himself blushing, but more by application of her standards than his own to the situation. "Oh no," he said hastily. "We turn the lights down, of course. The rest of us share the experience by rapport." Did she understand what *that* meant, he wondered.

She didn't stay horrified long. She was laughing now. "What do folks do in City when they get married, then?"

"Well, that's rather different. Then the whole ten join up, each member to the opposite member of the other person. After all, we couldn't have only the Physicals breeding—"

He broke off. She obviously didn't understand a word he was saying. More important, he was getting impatient. *"Now* do you see, honey?" His voice was almost beseeching.

"Course I see. And as long as you don't expect your friends to stand around while we're a-kissin' an' a-cuddlin' I don't care two hoots whether you're a part of some outfit back in City or not. I like the part I got. Besides, City may be City but—" she winked—"country's country."

Analytical floundered. "But, honey, don't you see? I'm not the right part. That's the part over there." He indicated Physical. "That's *his* function." He added hastily, "Of course, he's got others. He also—"

The blonde pushed him roughly in the shoulder. "Look, what are you sayin'?"

Analytical stood his ground manfully. "Isn't it obvious, honey? Look at him. He's handsome, isn't he? *And* strong."

"Him." Her lips curled. "He's not handsome. Anyway, there's plenty round here like him. It's *you* I'm interested in—not him. What's all this talk about bein' the right part? Why *ain't* you the right part? You seem to respond to me, all right."

Suddenly she put one hand to the nape of his neck, forcing him to lower his head. She kissed him, firmly and lingeringly. He was conscious of the natural sweetness of

her hair, the warm intoxicating freshness of her body—and many other things all at once.

He certainly responded. But she thrust him away. "There!" she said. "Make up your mind." Her eyes flashed tauntingly. Then she was off, dancing away into the woods.

Before he knew what he was doing Analytical was after her. She turned as she ran, and laughed, her white teeth gleaming.

"Belle," he called, and did not hear Head calling after him in an anguished voice — out loud, for Analytical was out of mental range by now. For the first time in his life. For the first time in his life he was gloriously and primitively free.

"Belle," he called again, this time gasping. However much his City-frustrated passions might be aflame, his City wind and limbs weren't made for this.

The girl halted and turned, smiling, victorious. She waited until he caught up with her.

"You see, you *do* want me," she crooned. "Guess you City folk ain't so quick to know what you want as us country folk. Still, we're on our own now. Come on, honey, put your arms aroun' me an' hold me close."

"Just a moment," he pleaded. She smiled tolerantly and let him regain his breath. Then she said, "Now—?"

But something had happened to Analytical. The enormity of what he had done dawned upon him. He didn't think it—he *felt* it with a vast sense of loneliness and inadequacy. How could *he, alone,* hope to cope with this girl—with anything? How could he have gone as far as he had? Was the country air alive with some subtle spirit of disintegration? Was *that* why everything was rudimentary, single-celled, here? His head swam.

The girl frowned. "What's the matter *now?"*

Analytical trembled. "I'm—I'm lost," he murmured brokenly.

She misinterpreted his reaction. She'd had to deal with bashful lovers before. It was hard work—and she'd never had a more difficult one to deal with than this. But it was surely worth it, for they were usually the fieriest, once they were awakened.

"There, honey," she whispered. "You ain't lost. You got me now." She brought her lips close to his.

But it was no use now. The nearness of her primitive sureness and self-sufficiency only added a sharper dimension of torment to his dilemma. He backed away from her. "I can't. *I can't,"* he moaned. "Go away."

"Why, of all the—!" She took a step toward him, her eyes blazing. But he looked so *woebegone,* so miserable, that she only shrugged, her ardor changing to a wonderment that she could ever

have made advances to anyone so weak and pitiful.

"City folk," she said, her voice dripping with contempt. Then she turned and stalked off into the woods.

Analytical slumped down on to the mossy ground in a state of utter misery and helplessness. And when the rest of Smith finally came within range, and stood over him, he felt only slightly better. He looked up at the other parts of Smith morosely. Complete silence, physical and mental, ensued. Physical bent down and helped him to his feet.

It was only a formality when Head said, "After *that* we do go back for integration."

No one protested now. On five heels Smith turned about and made his way back to the road. It wasn't until he was well on his way back to the copter port that realization impinged on his suddenly startled thoughts.

"Why, we *are* integrated," exclaimed Head. "That episode must have—"

But he didn't carry on the thought, for Smith found strangely little pleasure in it. He went back to City, anyway, and spent the rest of his holiday at the Museum of Electronic Arts—integratedly, respectably, and quite dully.

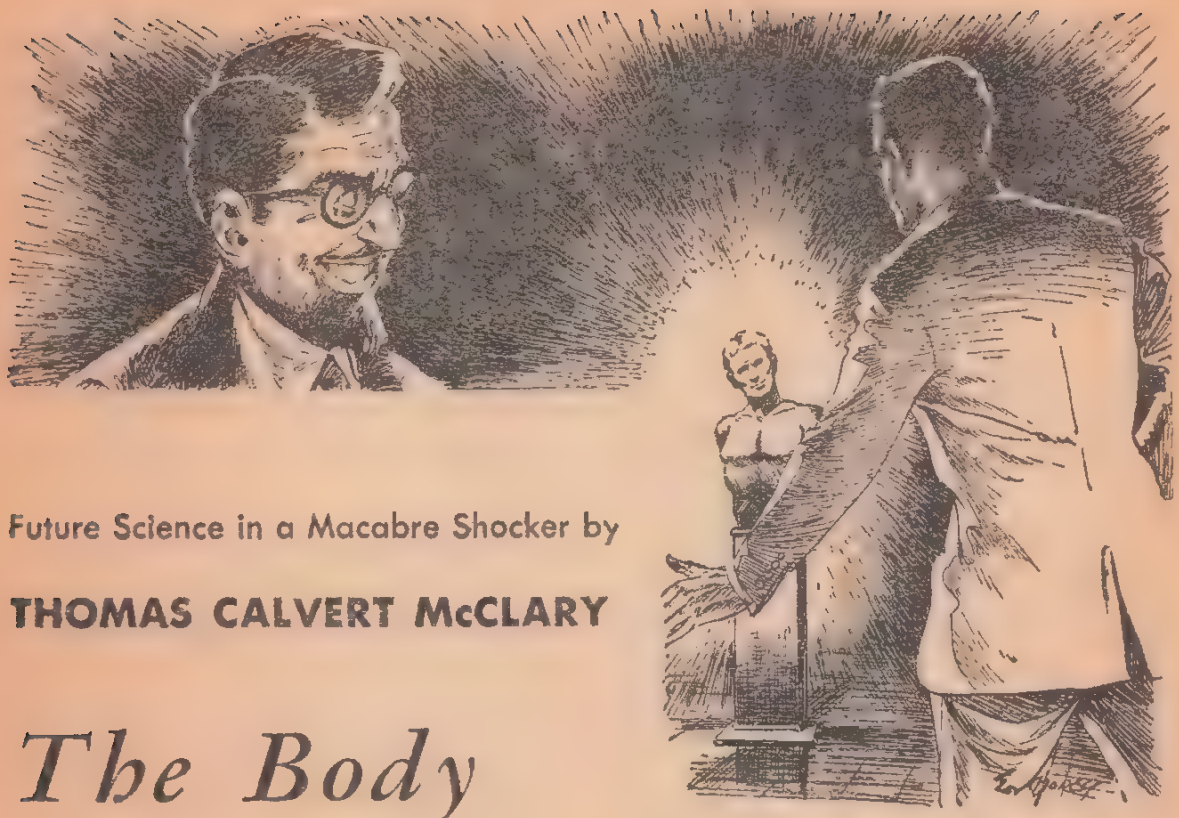
NEXT ISSUES

COMPLETE NOVEL

THE RESURRECTED MAN

by E. C. TUBB

Captain Baron's spaceship was wrecked in the Terran-Martian War and he found himself adrift in space, imprisoned with limited air in a space-suit that eventually became a floating coffin. The story of his revival in a world of strange hates makes this an extraordinary novel.



Future Science in a Macabre Shocker by

THOMAS CALVERT McCLARY

The Body and the Brain

Dr. Crawford was a brilliant surgeon . . . but brilliance alone can not save a man from tragic, self-willed destruction.

DURING THE three years since Arthur Holt's mysterious disappearance, more money than he had made in all his life had been spent in the attempt to find him. For the upper echelon of the modern scientific world had belatedly learned that his creative brilliance had dwarfed the efforts of lesser men, despite the fact that he had been untrained, unchanneled, unspecialized, and, in several other respects, had caused a lifting of eyebrows.

He had no technical knowledge

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of the atomic sciences, for instance. Yet when the admissions began to be heard, it became evident that the origin of at least three major fields of radically new conception had been his. He was missed chiefly in the fields of medicine and neurology, which had stirred his personal interest. Yet he had known virtually nothing of those sciences from the trained, orthodox point of view.

Holt had, unfortunately for him, been born in an age obsessed by orthodoxy and specialization, and by very virtue of his incredible intellectual independence, had stubbornly refused to be pigeon-holed. And such an attitude, of course, was impossible for the "practical" men to accept or forgive even though they had created a vast electronic brain at the Pentagon which was totally unable to solve a given problem with the speed, and the brilliance which he customarily displayed. But even though they had denied him a position of prominence in their councils they became grudgingly aware of his importance as soon as he vanished.

Having been Holt's closest friend, it was with a sense of pronounced elation that I rode northward through the night to somewhere in the Catskills to see him face to face after the mysterious interval of absence. Where the place was, I hadn't the slightest idea. Doc Crawford, whose hideaway it was, had shuttle cocked back and forth across the Hudson Valley like an Eric Ambler character on a cloak-and-dagger mission.

Certainly, Doc Crawford had acted wisely in keeping his hideaways secret, for some of his experiments in neurological surgery had evidenced such callous indifference to human suffering that they suggested the sadistic medical practices indulged in by Hitler's butchers at Dachau.

It was known, by a few, that not only had he been guilty of bribing morgue attendants to help him remove bodies from city mortuaries, but he had several times returned the "wrong ones" in a state of terrible mutilation. There had been quite a stir over one of these purloined cadavers, the victim having revived long enough to experience the hallucinatory sensation of passing by earthly transmigration into the body of an alley cat.

In my humble opinion, it had not been a "hallucination." Much as I loathed and condemned Doc Crawford's lack of human feeling and medical ethics, I gave him credit for surgical skill beyond that of any other surgeon whom I knew. My respect for him terminated there, however. I was not even as lenient as Arthur Holt had been when he described him as a mischievous, retarded adolescent. I considered Crawford a monster—a monster whose bluff, hearty, and surgically capable human form cloaked something sinister and almost reptilian.

However, after the first shock of hearing that Arthur Holt was alive and safe, it did not surprise me that he should have taken sanctuary at one of Crawford's hideaways, "to meditate on the world's future"—to quote Crawford's own, somewhat contemptuous explanation. The exact antithesis of each other, and openly contemptuous in the past, they must have still envied each other in secret.

As a matter of fact, they had arrived at many of the same ends from opposite poles. Crawford was incapable of originating a surgical theory, but he could take such a theory and shape it into achievement with the skill of his hands. Arthur, on the other hand, sparked with theories like an electro-magnetic generator, but could not push in a thumb tack with his hands.

The last place in the world that anybody would have searched for Arthur Holt was under Doc Crawford's roof. If Arthur had desired to lose himself in isolation and privacy, he could not have made a better choice. From the first I had suspected there was more to it than a simple desire to turn hermit.

"You might say that we've collaborated on some rather remarkable research," Doc Crawford told me. "As a neurologist yourself, I think you will be quite stunned by what we have accomplished."

"The use of the plural is quite a concession—coming from you" I told him.

He dismissed the remark with a shrug. "You're mistaken. I have actually become very fond of Arthur. In fact, I'll admit freely that without him I could not have achieved the results you are about to see."

"I came to see Arthur Holt," I protested. "My interest does not extend to your experiments."

"Exactly," Doc nodded and hummed to himself. He was in exceedingly good humor for a man whose vanity was usually truculent and vindictive.

We swung off a main highway onto an old macadam rollback, and then turned left, proceeding along a rocky dirt road that was little more than a lumber track. We bumped over the top of a steep hill into a yellow moon, turned right through a mile of scrub pine, and stopped in a clearing, by a weathered shack.

"This shack," he said, "is simply a blind. Occasionally I leave supplies there for the local good citizens to steal. Our destination is under that rock."

He drew a metal plug from his pocket, inserted it into a pothole in the rock and worked it about until there was a faintly audible, metallic clicking sound. A section of the rock pivoted back in the best Hollywood style, and a wedge of soft but brilliant light flooded out. Beyond the light I could make out a stairway of untarnished metal leading downward.

"Good for a thousand years, freeze, roast or flood," Crawford informed me. "This is my private, automatic time-capsule. It will open in exactly two hundred and forty-seven years."

I was struck by his curious, ironic smile but failed to connect it with the time interval itself. I later realized that forty-seven plus three made a round, even fifty, and it had been just three years since Arthur Holt's disappearance.

We descended the steps and passed along a narrow, metal-walled, air-conditioned corridor, Crawford used the metal plug again, letting us through a smooth, unjointed wall into an apartment that was obviously an enormous vault. Clearly, this was a laboratory as well as a museum for the future, and for the first time, I had a premonition that something rather ghastly lay just ahead.

But of course, I told myself, *if Arthur Holt is here, nothing very terrible can have happened.*

Crawford lightly touched an area of the wall, and a long series of rooms became flooded with radiance. "He'll be waiting for us," Crawford said, nodding. "But when a man is isolated so much in lonely meditation, it is best not to burst in upon him too suddenly."

He mixed us drinks from a sideboard, raised his glass and smiled at me over the rim. My impatience evidently amused him. He said, "This may be a momentous occasion—for the historians of the future, at least. I will do you the honor of making it dramatic."

He touched the wall again and the strange light vanished. But in the very last room of the apartment a single shaft of radiance shone down upon a perfectly moulded face—one of the few faces I have ever seen which was completely balanced, perfectly matched on both sides. The eyes were closed, and the stillness suggested absorbed meditation.

Crawford took me firmly by the arm and led me through the separating rooms.

At the last door we stopped. My old friend had not moved a muscle, and it struck me as odd that he had resorted to such theatrical dramatics, for the light was so arranged that it glowed only upon his face. Suddenly fear overcame me. I broke Crawford's grip on my arm and ran forward, calling hoarsely, "Arthur! Arthur Holt! It's Arthur!"

At that instant, his place of repose flooded with light, his eyes turned full upon me, he smiled with that rare charm that he could summon on all occasions, no matter how cruelly fate dealt with him.

I could only stare. Arthur Holt was an armless torso, a stripped bust terminating in a supporting cage, set upon a pedestal like a marble sculpture.

I turned suddenly and confronted Crawford. "You inhuman

monster!" I shouted. "I ought to kill you!"

Then I heard Arthur's voice behind me, disturbed, as he always was, by outbursts of violent emotion. "For heaven's sake, calm yourself Donald! There are some things that must be accepted—that are as irreversible as death itself."

I swung back to him. "Good God! What has he done to you?"

Arthur's voice grew more sharply incisive. "I'd say it was pretty obvious!"

A sense of outrage, so furious it reached beyond hate or violence, enabled me to say with absolute calmness: "Don't worry, Arthur —I'll have the police up here in no time!"

He shook his head, his eyes almost pleading. "For God's sake, Donald, shut up! What good would that do? I have no intention of being carried around in public on a platter, like a stuffed turkey!"

Doc Crawford said without raising his voice: "After all, I've made Arthur practically immortal. Automatically supplied with fresh blood, vitamins and electric impulses, his heart and lungs will last until he is discovered, and they can be replaced."

I took a slow step toward him, but he did not retreat. "So help me, I will see that you pay for this," I choked.

"But I'm not at all dead, damn it!" Arthur interrupted. "I know it's given you a shock, but that doesn't mean you have to make it harder for both of us."

Doc Crawford made steeples of his powerful surgeon's fingers and regarded them with smug satisfaction. "After all, his body never amounted to anything," he said. "Now if his brain had been housed in a body like mine—"

Arthur regarded him steadily for a moment. "Distasteful as the idea is, it has its merits. If you weren't so stubborn and unjustifiably sure of yourself you'd have transplanted my brain into your head."

Doc returned his stare unwaveringly. "I see. So now it's escape you have in mind, and you have the arrogance to think you can do it in my body! And what, *my dear old friend,* would happen to me if I took your suggestion seriously?"

Arthur said: "Why don't you tell him the truth? The operations which won you the Nobel Prize two years in succession *were* based on my ideas! If you had even a portion of my creative and analytical ability, you could probably dominate the world of medicine."

"That I'll grant," Doc said. He seemed amused by the thought. Suddenly, he chuckled. His eyes twinkled, and he disappeared into another room.

Arthur cast his eyes down. "What worse can happen? I was contemptuous of the brute body once—but no more."

I can't remember with any ex-

actitude how long this grim fantasy went on. These were several days of discussions, and I became increasingly aware that behind his stoical facade of acceptance and grim resignation Arthur had a plan. Definitely, adroitly, he was planting ideas in Doc's mind.

Once he said, with oddly phrased, ghoulish humor: "Now, from immortal, you want to scrap me like leftover fish!"

And then: "Seeing that it's my cranium you're raiding, I surely have the right to demand replacements, inferior as your discarded brain cells will be!"

Then suddenly, Doc had come to a decision and made his plans. I was elected to perform the delicate, almost impossible task of transplanting part of my friend's brain and incapsulating it with Doc's. If the operation succeeded Arthur's very core — his libido, his personality — would be absorbed by Doc Crawford like a small fish within a clam. And once he could utilize Arthur's creative genius as his own, there was no telling how frightening the outcome might be.

It was a drunken, hideous, sickening nightmare, and I balked. In the end, it was only Arthur's plea that won me. "Donald, this way a small part of me will survive. You've got to help me."

There was a stark desperation in his voice. It was the nearest thing to a normal, understandable human emotion I'd ever heard him express.

Doc Crawford dropped his air of sinister threat and looked relieved. I glared at him. "What makes *you* so sure I won't cross you up?"

He chuckled. "You can't. If you deviate only slightly from the techniques I've instructed you how to apply you will destroy your friend Arthur completely!"

My jaw set, but a cold, unearthly, hollow darkness swept over me, making resistance seem the act of a fool. I could only nod.

I will say one thing for Doc Crawford as I knew him then. Every aid that modern science could supply toward the perfection of surgical techniques had been installed in his laboratories. He had mentioned once that he had brought men who had been dead three weeks temporarily back to life—and I had no reason to doubt his word.

Once committed to this infamous enterprise, I was utterly absorbed by it. I became oblivious to the existence of everything else in the world—so much so that I lost all capacity to rebel. I had no thoughts, no feelings, no reactions of my own. I became a surgical automaton solely, following the instructions of Doc Crawford.

Only one extraneous circumstance remained to appall and bewilder me. That was the amused, bright-eyed wink which Arthur gave me just as I put him under

electro-suspension. Considering the seriousness of the operation — worse, the unnatural subjection and ultimate absorption of a man's ego, his integrated awareness of himself as an individual — I couldn't see how he could be happy about it.

Nor could I see how he could become anything but a pitiful segment of a split personality, dominated, and ultimately completely absorbed, by the personality of Doc Crawford, whose neural motor responses and higher faculties would remain relatively undisturbed.

Yet it was not difficult to understand how a man literally whittled down, as poor Arthur had been, would accept extinction with gratefulness and relief, preferring it to resurrection. Quite possibly his smile had meant: *"Thanks, my friend. You will understand."*

Still, a medical man's—and, more specifically, a surgeon's conditioning and instinct—is always to save. So I threw up barriers against my loathing and contempt for Crawford, and let only one consideration dominate me — to make the operation a success.

To my amazement, it *was* successful. Crawford's enormous physical vitality met the shock, and survived it, and within a few hours recuperation began. With Arthur, it was more difficult to tell. In a manner of speaking, his functional activities were mechanical and not as subject to physical shock and dislocation. But the level of his mind had been reduced, not raised, and it was still in a state of disorientation.

The last time I tried to communicate with him I received a bad emotional shock. No intelligent words issued from the mouth —just gibberish, and one outburst of violent invective. His eyes fastened on me with hell's fury in their depth, and I could only press his hand and turn away, appalled.

I had to see him to study and observe him further, of course. But I would throw the mobile switch off whenever I could, cutting down the vitality of what seemed a half-mindless, utterly crazed brain now. The same switch reduced all physical vitality to the bare minimum needed to maintain a normal pulse and breathing rate, and to replenish the always devouring and dying cells of the brain itself.

The success of Crawford's previously supervised and partially delegated operation, on the other hand, was something that compelled a medical man's admiration to the exclusion of all else. As he convalesced, I noted that he became increasingly interested in the retention of his physical vitality, and the strength of his hands.

For hours he'd lie looking at them, studying them, flexing them, almost with the awe of a baby discovering unsuspected potentialities in himself. A hard smile would

play over his mouth—the smile of a man who has taken a great risk and survived a hard fight, and who now feels confident that his recovery will be complete.

But at other times he would lapse into a semi-coma, and his expression would become totally blank. He would lie there breathing heavily, like a man laboring in physical combat, with his powerful hands clenched into solid balls, and his jaws locked, despite the absence of animation and intelligent awareness in his eyes.

Then he underwent a relapse. Terrible inward forces drew steadily upon his energy, placing an almost insupportable burden upon his heart, his lungs. Watching him was like watching the dark, ruffled surface of a pool beneath which great fish, or snakes or turtles, were locked in mortal combat.

There came a day when the charts and pulse readings passed the line of hope. Worn out by the long ordeal, I told myself that I could do no more. In the niche in the other room was a tragically shattered mind that would live into eternity unless—I killed it. And here also was a great, powerful body reduced by the black demons of the mind to a state of almost imbecile helplessness.

May God forgive me, but I hoped that Crawford would die and release me from the now intolerable prison of medical responsibility. I could do nothing to save him now. Oxygen, insulin, all the other aids were automatically registered and administered, but they did no good.

I went into the outer rooms and poured myself a stiff drink. I passed into a dead sleep, but its duration may have been exceedingly brief, for time in the air-conditioned silence of the time-capsule had far less meaning than in the world outside.

I awoke in a state of great agitation and I hurried back to the inner room. And there was Crawford, weak, but sitting up straight, and pulling on his socks. He looked at me steadily for a moment, then smiled and said: "The crisis is all over, Donald. It's a great pity that you cannot be given credit for your skill before the Surgical Society without landing in jail, or being locked up in a madhouse."

Perfunctorily, I asked, "How does your head feel now?"

He made a reassuring gesture. "The operation was a complete success. The crisis was not your fault. It was the result of a struggle for mastery by the split libido."

"But you finally conquered?" I asked. "You're sure of this?"

"Naturally," he said, and smiled again, and I wondered why coming from him, the remark seemed smug, while had Arthur uttered it I would have regarded it quite differently. "It was a foregone con-

clusion—if you skillfully followed all of my instructions."

I made a few tests and soundings. Doc was coming along fine—and that was not all surprising, for he was robust beyond the average in his physical constitution.

I left then, threw myself down, and slept the deep sleep of complete exhaustion. It was like falling into the utterly black, silent void of cosmic space. At some point, my temperature rose and I became delirious. Passing the crisis, it increased my bitterness to realize that I had been saved by Crawford's care. He had given me drugs and placed ice-packs on my head to reduce the fever.

He was fully recuperated, and bright as a lark when I was able to get up. Our food supply, he explained, was running short and he asked me if I thought I could make the trip back to town.

My one, overmastering desire was to get out of that living hell. I'd have said 'yes' even if I had known the trip would kill me.

We took one final look at poor Arthur's bust with the mobile power on. Arthur's lips twitched convulsively and his once perfect, symmetrically balanced face was convulsed almost beyond recognition. I turned away from it with a shudder, too shaken to reach out and press the cold hand of my friend.

He was no longer Arthur Holt, the man I had known and respected and admired. He was just a *thing,* and I could not feel that anything good would come of his survival, even in eternity.

I stumbled out of that ghastly place and got into the car and drove in silence for ten minutes.

Crawford was the first to break the silence. He said, "My wife hated him more venomously than I did. How in hell am I going to win her love back in his body?"

I muttered moodily, "what wife?" for I knew that Crawford was a bachelor.

"My wife — Alice." Crawford spoke impatiently, turning to stare at me. The voice was Doc's, but the testiness was Arthur's.

A cold chill went through me. "Good God!" I thought. "His mind *is* unbalanced, despite the success of the operation. He thinks—but no, it's unbelieveable."

He seemed aware of my thoughts. He smiled, but it was an understanding smile, not gloating. He said gently, "Donald, don't you understand, don't you know even now who I am? The operation was more successful than you dreamed. I am Arthur!"

I closed my eyes and drew a deep breath and listened to the booming of my heart. I hadn't even considered the possibility, and despite his incredible statement, it did not seem in the least convincing.

I shook my head. "No, you can't be Arthur. With the transplanta-

tion of the whole brain, a transfer of personality might have been possible. Otherwise it's inconceivable. The dominance would belong to the least disturbed brain.

He laughed. He shook my shoulder. "Imbecile! Why do you think I wanted you to transplant those memory cells into the other head. My head, incidentally!"

"Why?" I asked.

"Because of the inefficiency of the juvenile mind," he said. "And Crawford's mind *was* juvenile, although it contained some brilliant cell groupings. However, he needed *all* of his brain cells, *all* of his brain, to produce an efficiency equivalent to that possessed by a mature mind operating at relatively low level."

"That scarcely explains your crisis, the inner conflict," I said.

"You're forgetting," he said, cutting me short, "that what you left of Crawford's mind in Crawford's head was rooted and comparatively undisturbed. What you introduced of me was crippled by disorientation and shock. It took awhile for me to get my own nodes working, to effect electro-psycho coordination and control."

I pretended to accept his explanation, but I was never really convinced until his wife—the original Arthur's wife, that is—finally got an Enoch Arden decree and married the brilliant surgeon known as Dr. Crawford.

What this man—or these men, or fragments of men—have given the world since in the fields of surgery and the reconstruction of damaged brains and nervous systems is known to everyone.

But Crawford, or the portion of him I transplanted into Arthur's skull, will never be able to overcome the mental power of the Arthur cells I left there.

Sometimes, lying awake at night, I remember what the original Crawford was seeking and what the right answer really is. I remember him asking: "Which mental endowment would you say was the most callous and inhuman —the cold, calculating, isolated thinking of a brain like that, or the hot-blooded humanness of those of us who still carry a more primitive strain in them?"

Of course Arthur, in Crawford's body, has become humanized now under the influence of new environmental and physical factors. He is a much greater man than Crawford ever could have been, and a much more human and tolerant man than Arthur ever was.

Still, though I saved this man of science, I cannot venerate and like Arthur as I once did.

Possibly the answer is that the Cosmic Intelligence meant man to be truly himself always—with all of the weaknesses and strengths he was born with. For is not that the sanest path to spiritual growth.

Yes — that may well be the answer.

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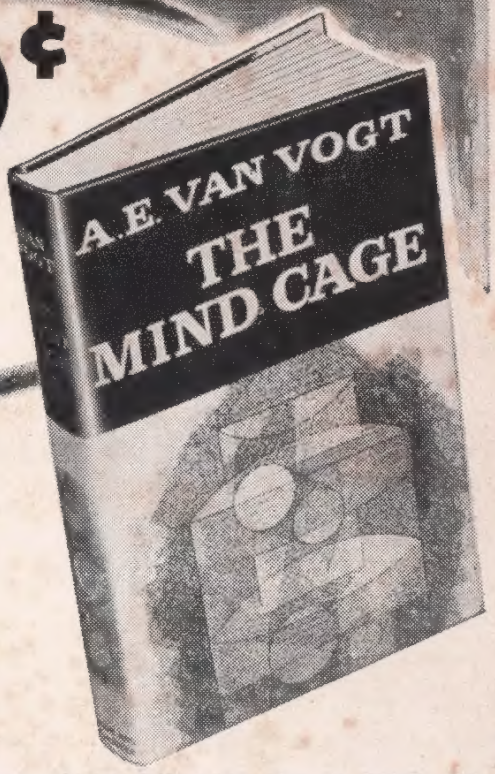

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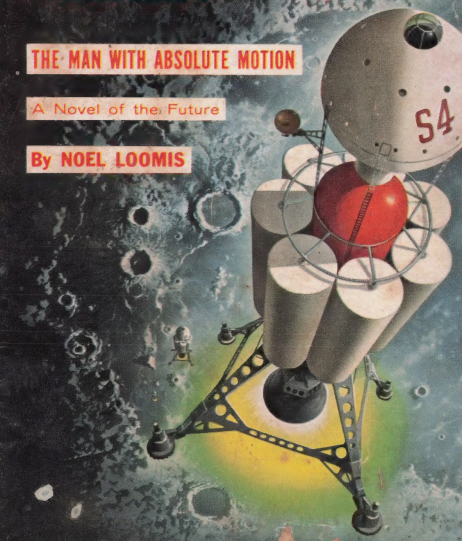

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